



TIPS

ANNUAL JOURNAL

2018



10 Years of Excellence

Premier Institute in North-East India coordinating professional learning experiences and training for students in the field of Paramedical Sciences

Editorial

Dear Readers,

“When you write more and more personal it becomes more and more universal.”

Writing is an act of reacting to the environment around you. An expression is a basic instinct of thoughtful mind and the act of writing is one of the fountain head of ideas that springs into poem or article. The writing comes to life when it meets its reader.

Students are most enthusiastic budding creative expressionist who just need a platform to throw their ideas and emotions on the paper. A college magazine is there to capitulate all those expressions for the tasteful readers. Our “Annual Magazine” is one of the most eagerly awaited moment for students, staff and all those associated with TIPS fraternity. The college magazine which showcases the literary expressions, social awareness and recognition to all the achievers in the academic and extracurricular activities, strengthens the internal bonding amongst the “Tipsians” as one family.

As we enter 10th year with this publication, a budding tender plant flourishing into a self-contending tree grounded firmly into the past and solidifying the future. The editorial board like every year went through a stupendous task of selecting and finalizing the best of the best creative material for the magazine. We are overwhelmed with the humongous response both by the students and the staff members with their drafts. All members of our Institute tried their best to accommodate all the deserving articles and write ups into the magazine.

We hope this 10th edition of our Annual Magazine will set the bar higher with its interesting and novel material which will certainly astonish the reader.

Heartily Penned

Pankaj Nayan Trivedi
Editor

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From the desk of Jt. Registrar (Exams), Tripura University

I am delighted to learn that the members of the Tripura Institute of Paramedical Sciences (TIPS), Hapania, are going to celebrate the 9th Annual Day of their esteemed institute. Since its inception in 2009, TIPS has been playing a significant role in providing well trained professionals in seven disciplines in paramedical programmes namely BMLT, BPT, BMRIT, BHM, BOPTM, BMTOT, BMRT to health services in Tripura and beyond. In addition TIPS community also has shown their proficiency in providing well trained nursing staff since 2012. On an average, about 280 paramedical and 40 nursing professionals graduate from this institute every year. I would like to congratulate the teachers and administrators who made this commendable achievement happen.

On the eve of the 9th Annual Day Celebration, I would like to express my confidence that TIPS community is capable of achieving greater heights to ensure a stronger, healthier and happier society – need of the day.

Letthuama Darlong
Jt. Registrar (Exams)
Tripura University



From the desk of Secretary, BIPS Trust

It is indeed a great honor to be the editor for our Institute and it's an immense pleasure seeing our publications recount the various projects and activities in which all members of our Institute are actively involved.

With an end to a whole academic year this is our Annual Journal. We are initiating this issue of newsletter as a way of keeping in touch with teachers and educationists and all other members who have been an integral part of our journey.

Each year, our team of editors, designers, photographers, and correspondents, in addition to generating creative content for the student population, work extensively to report on events in and around the college. The final publication reflects and encompasses the diversity inherent to the academic and extra-curricular spaces in TIPS.

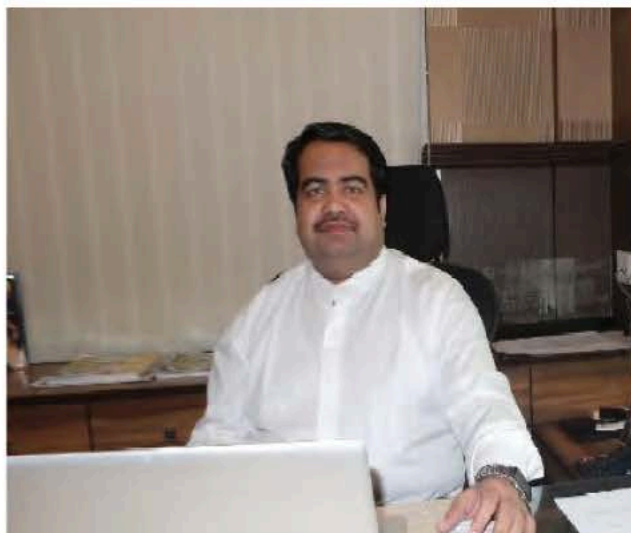
As most of us are aware, our guiding philosophy at TIPS has been that “hands-on learning” or “learning by doing” trumps all other forms of learning. It is fair to say that this philosophy has served us well in making all the students exposed to our methods take a quantum leap in better appreciating, understanding, learning and remembering the scientific concepts. In this process our students have realized that learning can be easy, enriching and fun too. I am sure that going forward, their exposure to our pedagogy will serve them well in all their academic and professional pursuits and careers.

I keenly hope that our Newsletter continues to expand its reach to achieve its vision of being a true representation of our Institute. I intensely hope and believe that our team will continuously strive to build on this ethos just as much as now during the upcoming academic years.

A huge thank you to all the persons who contributed in writing the wonderful and inspiring articles, without which there wouldn't have been newsletter issues throughout the academic year.

Heartily Penned

Pankaj Nayan Trivedi



From the desk of Trustee, BIPS Trust

Dear All!!

"The greater the obstacle, the more glory in overcoming it." Molière

We continually face challenges in life - how we view them defines us, We at TIPS , choose to see challenges as stepping stones & opportunities that we have encountered along the way for us to use, to "step on" so that we can achieve more, develop further and ultimately actualize more of our goals!The new skills and competencies have become a key element in ensuring quality in educating our future achievers.

We have accomplished a great deal in these 10 years - we have identified our goals, set aside time to achieve them. Our work ethic and achievements at TIPS are solid - they are the collective results of each and every one here. At this unique institution, we hone the academic skills, finetune the aesthetic senses and work towards building a Holistic culture that values the individuality of each student, helping them realize their innate potential.

In the end, I would like to offer my best wishes to all members of "TIPS " for all its future endeavour.

Warm Regards
S. S. Trivedi



From the desk of CEO

Success comes to those who work hard and stays with those, who don't rest on the laurels of the past."

We live today in a world that is very different from the one we grew up in, the one we were educated in. The world today is changing at such an accelerated rate and we as educators need to pause and reflect on this entire system of Education. Is our Institute well equipped to prepare our children to face the challenges that the future holds?

Questions, such as these are factors that motivate us to go through a continuous process of reflection and hence we at TIPS work at implementing a well balanced curriculum to ensure that the our young aspirants who walk in TIPS will not just love their college years but truly be prepared to face life's challenges.

Even as we impart education to match the advancement in technology and globalization, we march our students ahead with TIPS' ethos of moral values and principles. We endeavor constantly to instill these qualities in our future generation. We pride ourselves to help them grow and develop into sensitive and responsible citizen and skilled Paramedical member of staff to serve the healthcare sector worldwide.

Each annual issue of our college magazine is a milestone that marks our growth, unfolds our imaginations, and gives life to our thoughts and aspirations. It unleashes a wide spectrum of creative skills ranging from writing to editing and even in designing the magazine. I congratulate the entire editorial team for their hard work and dedication in making this dream come true.

A committed and supportive management, dedicated teachers, caring and co-operative parents blend harmoniously to create a student –centric college. It is natural to find in this ambience, the intensive use of a variety of thinking activities, strategies and group dynamics so that the classrooms become alive.

Teamwork is the hallmark of TIPS. I am very sure through collaborative effort we can achieve more to benefit our students who are the future leaders of tomorrow.

Happy Reading!!!

Kallol Biswas



From the desk of Principal, TIPS, Paramedical

It gives me immense pleasure to address the staff and students of Tripura institute of paramedical sciences on the occasion of 10th foundation day of the institution. It is our proud privilege and satisfaction that tips has gloriously stepped into 10th year of existence with flying colors.

This institution is a knowledge hub of health care fraternity in which students “learn, share and shine” ultimate goal of our institution is to bring out the hidden talents of our students. Empowerment of our students for their all-round development through education is our cherished motto. We inherited a strong foundation to march ahead and achieve objective for a brighter and prosperous India. Tips gives opportunities for extracurricular activities with proper guidance so that they become endowed with skills to face today’s challenging world. TIPS has exceptional friendly faculties who always tries to help and enhance students’ knowledge.

I feel proud enough of being the principal of such an institution dedicated to the causes of better India by serving the health care industry. Paramedics of the institution have a bright future all over India. Tips is committed to deliver best Professionals in the health care sectors who will retain their relentless pursuit for perfection throughout their lives. The tips students will be pioneer in excellence to serve the health care sector of India.

With best wishes

Dr. Chhanda Banerjee
Principal (Para- Medical)



From the desk of Principal, TIPS, Nursing

"Somewhere, something incredible is waiting to be known."

-Carl Sagan

Dear students, alumni, parents, colleagues and well wishers,
The School and College of Nursing of TIPS, Tripura, is the result of the powerful vision of the TIPS, spearheaded by a group of highly committed and dedicated Management Team. It has been 10 years since Tripura Institute of Paramedical Sciences (TIPS) was established in 2008. Looking back our institute is showered with blessing of God and have come a long way to establish ourselves as premium educational institute including Paramedics and Nursing.

Nursing is considered to be the largest health care profession in the world. Nursing is a practice to nurture towards another individual. We, in TIPS focus on academic progress along with holistic educational excellence of our students, with a strong moral base. Our academic institute is affiliated to Tripura University, Indian Nursing Council and Tripura Nursing Council.

The college has also achieved continuing success in serving the cause of female education in the State, which is 83 per cent approximately, of the total literacy rate 94.65 per cent.

The college is having 34 faculty members with various specializations who are both motivated and passionate towards their profession along with a team of self-motivated and self-driven office and supporting staff. We seek to engage our industry associates from health and educational institutions, to contribute in the process of learning by sharing their proficiency and practices gained outside of the classroom. The college enrolls 280 students every year, on an average, to its courses.

We believe in openness of mind, dignity of conduct and mutual respect as the back ground of social and economic diversity and develop a confident understanding for the students in the Global society.

I feel proud of our Alumni who are holding responsible position in different part of the country.

I assure that our college will play a meaningful role in the competitive times to come and scale new heights in the years to come.

I pray for future growth and prosperity of the college and wish the managements, staff and students all success in the years to come.

Sampa Sengupta
Principal (Nursing)



Committee Report

"Individual commitment to a group effort—that is what makes a team work, a company work, a society work, a civilization work."

--Vince Lombardi.

Tripura Institute of Paramedical Sciences (TIPS) always tries to produce quality result. For better production we need team work. That is why from its inception since 2009 we feel to distribute the total job of this institute in different compartments. This has provided the idea to make different committees so that the institution can run in a smooth way and can produce a holistic landmark to the society. Various committees are formed in the College for the smooth and efficient management of activities. It also gives the opportunity to the faculty to grow and develop in their extracurricular activity/field and administrative skills.

The members of the committees have the finest ability for conducting the responsibilities. The selection of the members is based on their previous performances. So, all members have the urge to prove their performances and responsibilities throughout the year.

Annual report of games and sports committee

We are thankful to the Publication Committee of TIPS for providing us the opportunity to publish the Report for the Games and Sports Committee. Games and Sports help all persons to develop personality. With this view, the Games and Sports Committee was established in the year of 2009. Every year since 2009, we are conducting Annual Games and Sports with our Students, Teachers and Staff of TIPS. All members of TIPS really enjoy this event every year. With progression of time, we had some student athletes and players from our institute who represented Tripura University for different Inter University meet all over India. In the year 2013, Mahamadul Hassan was selected as main goal keeper for Tripura University Football Team and the team was sent for the East-Zone Inter University Football Tournament held at Barasat, West Bengal. In 2014, Table tennis team from our Institute took part in Inter College Table Tennis Championship organized by Tripura University. Women's team became Champion and Men's team became Runner Up in Team event. In Inter University Championship, 2014, Jaya Chakma became Champion, Dipika Debbarma became Runner Up and Rima Debbarma got the Third Position from TIPS. Three students from TIPS, Upama Marak, Prasenjit Saha and Manuj Sinha, represented Tripura University Table Tennis team for participation in East Zone Inter College Championship held at KIIT University, Bhubaneswar on 27th September, 2014.

In 2015, Animesh Nath represented Tripura University for East Zone Inter University Table Tennis Championship held at Milhila University, Darbhanga, Bihar. In the VIIIth Inter College Football Championship held at Longtorai Valley, TIPS Football Team lead by Mahamadul Hasan and coached by Dr. Atanu Sinha (PT) achieved their best performance till date. This team defeated Bishalgar Govt. Degree College, Gondachhora Govt. Degree College and Maharaja Bir Bikram College to reach the Quarter-Finals where they lost by Holy Cross College by a solitary goal. Mahamadul Hasan, Dinesh Reang, Subrai Debbarma, Lalthan Zuala Darlong and Amit Zamatia were selected to represent Tripura University Football Team. Finally, due to some academic commitments, only Mohamadul Hasan was able to go with the team to Mizoram. The team became runners and qualified for the main event at Gwalior. Mohamadul Hasan was the first choice goal keeper during entire tournament. Our students took part IX th Inter college Athletic Meet-2016 on 12-13th November at Tripura University. In that Championship they got total 8 medals in 4 X 100 m Relay Race and Long jump. In 100 mt. race, Imran Hossain got Silver Medal and in Long Jump (Male), Saheda Khatun got Silver medal in long jump (Female), Imran Hossain got Gold Medal & Ronit Debbarma got Bronze Medal. In Relay Race, the team got Bronze medal. The members of the team were: Ranit Debbarma, Imran Hossain, Diptanu Chakraborty and Sourav Das. First West District Weight Lifting, Power lifting, Body Building Championship-2017 was held on 8th January at Resham Bagan Athletic club.

Our students got 6 medals in weight lifting and 4 medals in power lifting. The medal winners are: Imran Hossain, Rajesh Kumar Singh, Deepjyoti Saikia, Saheda Khatun, Ayesha Khatun, Raseda Begam. First West district Arm Wrestling Championship 2017 was held on 10th January at Vivekananda Byamagar Club, Agartala and students got total 7 medals. The medal winners are: Tapan Debbarma, Apurbayan Biswas, Saheda Khatun, Ayesha Khatun, Jayashree Singha, Suchitra Das, Durba Bhattacharjee. Tenth Inter College Yoga Competition-2017 was held on 28th January at Tripura University. Our students got 3rd position in group and got total 5 medals in Yoga Competition. The medal winners are: Jahangir Hossain, Narayan Majumder, Tuhin Tripura, Niren Kumar, Madhab Debnath. One girl was selected for National Strength lifting Championship-2017 that was held at Neheru Stadium, Guwahati, Assam on 28th -30th July, 2017. Tripura University Sports Tournament 2017-18, that was held on 26th October, in KABADDI (Women), two students were selected for national meet, which was held at Rewa, M.P on 11th November, 2017.

On 27th October, 2017, in KABADDI (Men), TIPS team was qualified up to quarterfinal. Tripura University Sports Tournament that was held on 31st October 2017, in KHO-KHO (women), one player was selected for National meet in camp. Tripura University Sports Tournament 2017-18. In Badminton (M/W) was held on 7th September, 2017. In this event total 4 students were selected for national meet that was held at KIIT Bhubaneswar from 01.10.2017 – 04.10.2017. In Yoga (M/W) one student was selected for national meet which was held in Bhubaneswar. West District Weight Lifting, Power Lifting, Body Building and Arm Wrestling Competition was held on 25th and 26th December, 2017. In this event they got 8 medals. On 31st December in KHO-KHO (M/W), two students were selected for national meet camp. In JUDO (M/W), they got one medal. On 19th January 2018 at Tripura University campus Rumi Chowdhury was selected for Inter University Table Tennis Championship that was held on February 20, 2018 at Assam. The Joint Conveners have much pleasure to express the report of Games and Sports Committee of TIPS.



Report of Scientific Committee

Scientific committee of our institution had been undertaking different scientific activities to provide a scientific outlook to the students as well as the faculties and other staff members of TIPS. These were initiated under the supervision of our founder principal Late Prof. Dr. Chandan Mitra. Science then, several scientific activities were organized at our institute as well as students and faculties participated in different scientific activities organized at different parts of Tripura. It includes scientific talks, seminar, students' seminar completion, scientific model preparation, scientific drama, students' project program etc. Several scientific talks were organized by the faculty members, students and guest speakers at our institution. These are as below:

Name and Designation of the Speaker	Title of the speech
Dr. Subhra Chattopadhyay (Lecturer, TIPS)	A study to examine the possible ameliorating effects of Black Tea Extract (BTE) on non-alcoholic steatohepatitis (NASH) –induced liver and bone pathological changes.
Prof. (Dr.) Chandan Mitra (Former Principal, TIPS)	Health promoting attributes of back tea extract (BTE).
Dr. Aroop Ray Barman (Medical Officer, Regional Cancer Centre, Agartala)	Basics of Cancer
Dr. Subhra Chattopadhyay (Asst. Professor, TIPS)	A study on tea pluckers with special consideration to their working comfort, health and welfare aspects, and on health aspects of tea processing factory workers exposed to industrial noise.
Dr. Subrata Deb (Vancouver General Hospital, Faculty of Medicine, University of British Columbia, Canada)	Vitamin D ₃ metabolism : A key factor in disease pathogenesis and treatment.
Dr. Goutam Datta (Asst. Professor, TIPS)	Vision 2020
Dr. Arup K. Barman (Former Lecturer, TIPS)	Dispensing Optics- About Ophthalmic Frames
Dr. Sabyasachi Choudhury (Former Asst. Professor, TIPS) & Dr. Upanita Debnath (Asst. Professor, TIPS)	Prospect of Physiotherapy, past, present and future.
Mrs. Ashima Das (Former Lecturer, TIPS)	Characterization of low molecular weight protein "Luffin".
Mrs. Nabamita (Asst. Professor, TIPS)	Anthropometric Assessment of nutrition of Bengali girls, (6-10 yrs) of Baidyerdghi, Bishalgarh.
Mr. Mrinal K. Sarkar & Mr. Nirmal Debnath (Students, BOPTM)	Assessment of strabismus by Worth Four Test
Mr. Birbar Debnath & Ms. Papia Baul (Students, BPT)	Preventive Physical Rehabilitation
Mr. Nirvik Dewan & Ms. Jyoti Chakraborty (Students, BMLT)	Physiological correlation of EMI and Working Efficiency
Dr. Asankur S. Das (Asst. Professor, TIPS)	Protective action of aqueous black tea (<i>Camellia sinensis</i>) extract (BTE) against ovariectomy-induced oxidative stress of mononuclear cells and its associated progression of bone loss.
Ms. Krishna Das (Student, BPT)	Physiotherapy in Obstetrics and Gynaecology
Mr. Lienlallien Halam (Student, BPT)	Weight Loss Training
Dr. Sutapa Das (Asst. Professor, TIPS)	Protective role of spinach (<i>Spinacia oleracea</i>) against the development of experimental epileptogenesis: behavioural, biochemical and morphological correlation

After formation of Science Forum in the year 2010, students and faculties of our institution participated in State Level Science Fair and presented different scientific models/exhibits. Our students also participated in State level Inter College & University Science Drama Competition, and Students Project Programme organized by Tripura State Council for Science & Technology, Govt. of Tripura. The details of these events are mentioned below:

Name and Designation of the Speaker	Title of the speech
Dr. Kunal Sikder (Lecturer, TIPS)	Quercetin and β -sitosterol two structurally dissimilar phytochemicals of <i>Moringa oleifera</i> (Sajna) leaf extract ameliorate high fat diet induced dyslipidemia
Ms. Asor Ali (Student, BMRIT)	Computed and Digital Radiography - An Overview
Mr. Suresh Malayath, General Secretary, ISRT	Radiation Safety & Regulatory Requirements in Radiology Departments
Mr. Panneer Selvam, Associate Professor of Medical Physics Radiological Safety Officer, Sree Rama Chandra University, Chennai	Evolution of Medical Imaging Technology
Mr. Anayara Jayakumar, Deputy Manager, Hind Labs Limited, New Delhi	Nuclear Medicine Technology-Basics to Advancements
Mr. Rajesh Keshavan, Deputy Manager, Hind Labs Limited, Trivandrum	Career Prospects & Professionalism in Radiological Technology
Mr. Sunil Kumar, Senior Radiotherapy Technologist, Regional Cancer Centre, Trivandrum	Radiation Therapy Technology-Yesterday, Today and Tomorrow
Mr. Panneer Selvam, Associate Professor of Medical Physics Radiological Safety Officer, Sree Rama Chandra University, Chennai	MRI-Basic Physics to Advancements
Mr. Oinam Gokul Singh, Lecturer, TIPS	Biological Effects of Radiation
Ms. Sarbari Saha, Second Year, BMRIT	Electromagnetic Radiation and Spectrum
Dr. Anirban Guha, Asst. Professor, Dept. of Physics, Tripura University	Science for Nation Building
Dr. Asankur S. Das, (Asst. Professor, TIPS)	National Science Day and its Relevance
Ms. Sanjukta Ghosh (Student, BOPTM)	Role of Science in Development of India
Ms. Rima Debbarma (Student, BPT)	Role of Science in Development of Health Sector

A. State Level Science Fair:

(i) Year 2010-2011:

Model 1: Assessment of Community Health by Examining Various Nutritional Indices

Title : Assessment of Community Health by Examining Various Nutritional Indices

Sub-theme: Community Health & Environment

Name of the Students Inventor : Prasanta Majumder & Papia Rani Baul

Guide Teacher : Dr. Asankur S. Das

Model 2:

Title : Assessment of Community Health by Examining Various Dynamic Lung Volumes

Sub-theme: Community Health & Environment

Name of the Student Inventor : Supratim Majumder & Bulbul Islam

Guide Teacher : Dr. Subhra Chattopadhyay

(ii) Year 2012-13:

Model 1:

Title : Plan of a Clean Environment and Healthy Community

Sub-theme: Community Health & Environment

Name of the Student Inventor : Sujan Saha (BHM, 2nd Year)

“Every Thing begins with an idea” – Earl Nightangle

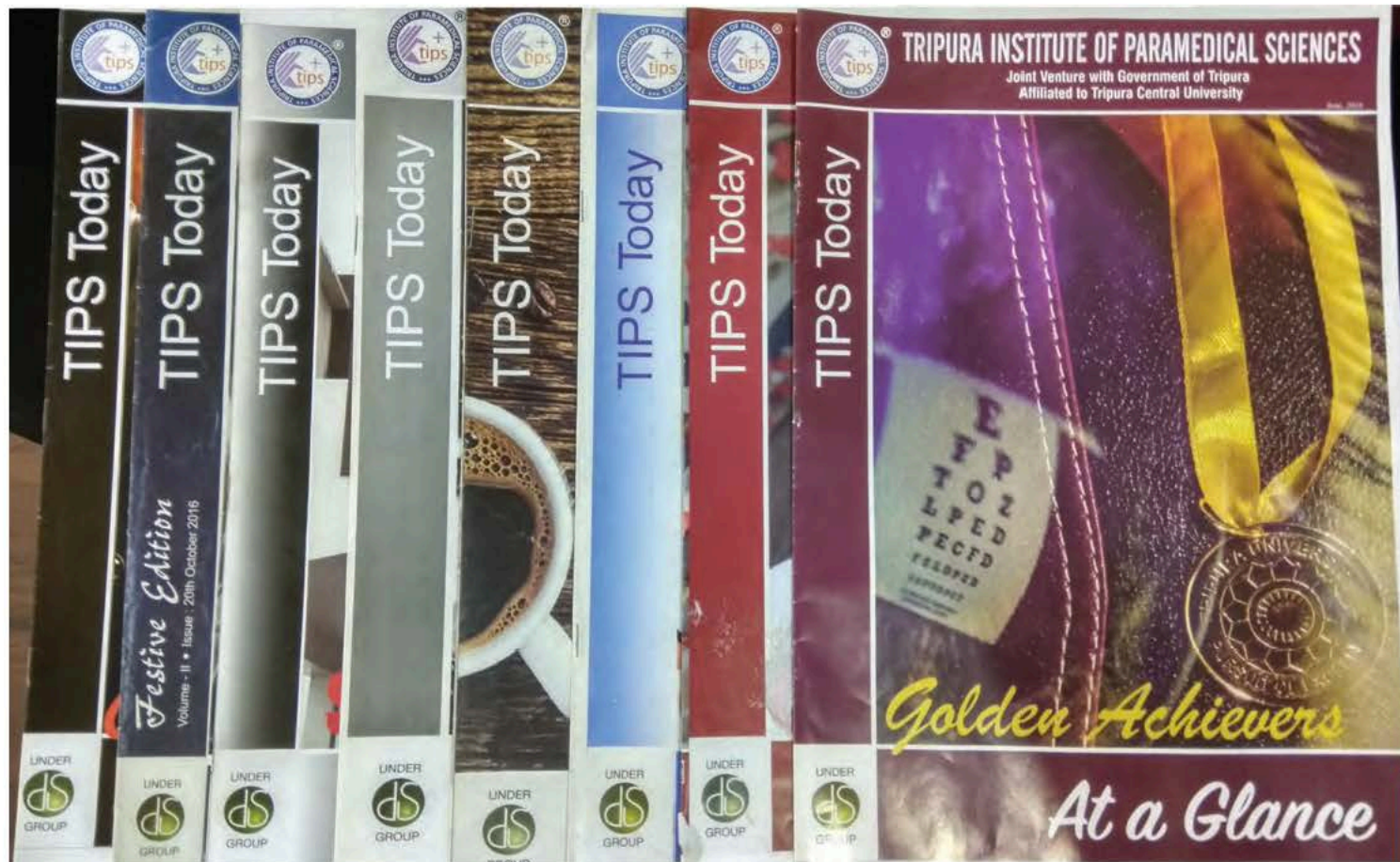
The launch of the “TIPS TODAY “was a major step for all of US. It was indeed a feeling of contentment, delight, enthusiasm, eagerness and anxiety as we launched our first edition of Newsletter. We all are honored to be entrusted with our newsletter “TIPS Today” that has broken so much ground in last couple of months. Our newsletter is not merely a publication that just entails report on developments; it stands for something way apart.

We embrace the idea that serves a purpose in our world that goes beyond all parameters and we strongly believe that the articles, news, stories published in our newsletter is responsible and sustainable worth for all of us towards progressive knowledge and aspiring ideas. We wanted it to be entertaining and informative and at times contrary, but most significantly useful for all our readers. Inside each newsletters readers will find a mixture of news, features and regular columns on a wide range of health-related topics, stories that are inspiring, our accomplishments and accolades, notable awards won by our young achievers, our celebrations and our health camps, our moments of joy , care and love clicked and captured to be restored within us and cherished always .

We are passionately interested in the nitty-gritty of what makes us motivated and enrich our depth of knowledge thus inspiring our creative people at TIPS fraternity to execute and bring up their hidden talents sketched in our newsletters which is published in equal quarterly editions.

We keenly look forward to reach higher in sharing more and more of our bulletin and be an informative as well as an interest for all our readers. We strongly hope that this newsletter will help our alumni stay connected with their alma mater, so that they can contribute to the growth and achievements of our institute.

The Publication Committee



Report of Examination Committee

Examination Committee had been playing a major role since the inception of TIPS in the year 2009. As all the paramedical programmes are affiliated under Tripura Central University, all the examinations are being conducted in accordance to the rules and regulation of the paramedical programme. We undertake the evaluation process internally by periodical internal and terminal assessments in every academic session. Till academic session 2014-15, all the programmes were run by annual pattern of the examinations. From the academic session 2015-16, the credit based paramedical degree programmes were implemented. The year-wise details of final year qualified students and the success rate are given below.

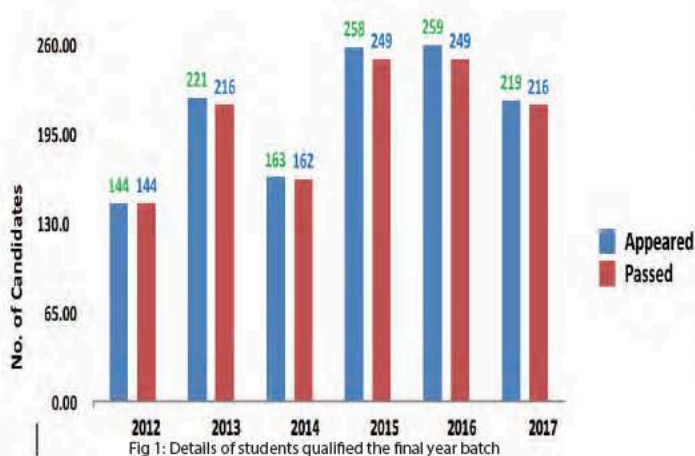


Fig 1: Details of students qualified the final year batch

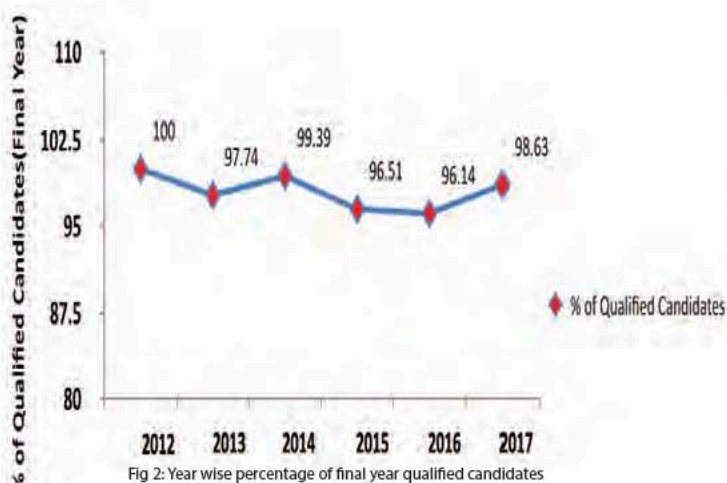


Fig 2: Year wise percentage of final year qualified candidates

Our students also showed their competence in the university examinations. This is due to enormous dedications of all the students, faculties and all other kinds of staff members of our TIPS fraternity. On the basis of the performance our students achieved gold medal in the different programmes from Tripura University. The detailed list is given herewith along with their percentage of marks they achieved.

Year : 2012

Course	Name	Final Grade	Percentage of Marks	University Medal Awarded
BMLT	Jyoti Chakraborty	O Grade	76.30%	Gold
BHM	Subrata Acharjee	O Grade	76.90%	Gold
BMRT	Jayanta Debnath	A Grade	74.96%	Gold
BMRIT	Tapasree Majumder	O Grade	76.00%	Gold
BMTOT	Saddam Hossain Khan	A Grade	74.20%	Gold

Year : 2013

Subjects	Name	Final Grade	Percentage of Marks	University Medal Awarded
BMLT	Palash Patari	A Grade	74.13%	Gold
BHM	Jelisa Paul	A Grade	73.80%	Gold
BMRT	Subrata Roy	A Grade	73.04%	Gold
BMRIT	Dipan Nath	O Grade	78.75%	Gold
BMTOT	Nabanita Shome	A Grade	68.50%	Gold
BOPTM	Payel Podder	O Grade	77.84%	Gold
BPT	Papia Rani Baul	A Grade	73.34%	Gold

Year : 2014

Subjects	Name	Final Grade	Percentage of Marks	University Medal Awarded
BMLT	Purnasree Debi	A Grade	73.57%	----
BMRIT	Sarbari Saha	O Grade	79.21%	Gold
BMTOT	Amlan Dasgupta	A Grade	65.20%	Gold
BHM	Satadru De	A Grade	70.97%	Gold
BOPTM	Tamalika Debnath	A Grade	72.38%	Gold
BPT	Krishna Das	A Grade	74.41%	Gold

Year : 2015

Course	Name	Final Grade	Percentage of Marks	University Medal Awarded
BMLT	Moumita Das	O Grade	76.83%	Gold
BMRIT	Wilson Hrangkhawl	O Grade	78.54%	Gold
BMTOT	Litan Debroy	A Grade	65.83%	Gold
BHM	Prasanna Debbarma	A Grade	71.57%	Gold
BMRT	Kajal Mishra	O Grade	79.69%	Gold
BPT	Sunanda Bhowmik	A Grade	69.19%	Gold
BOPTM	Bijoyeta Singha	A Grade	72.72%	Gold

Year : 2016

Course	Name	Final Grade	Percentage of Marks	University Medal Awarded
BMLT	Shrabanti Sarkar	O Grade	78.13%	----
BMRIT	Mikir Jini	A Grade	76.87%	Gold
BHM	Litan Das	O Grade	75.77%	Gold
BMTOT	Farid Uddin	A Grade	71.27%	Gold
BMRT	Jaydip Debnath	A Grade	73.35%	Gold
BOPTM	Deepika Samanta	A Grade	67.69%	Gold
BPT	Sanghamitra Bhattacharjee	A Grade	68.19%	Gold

Year : 2017

Course	Name	Final Grade	Percentage	University Medal Awarded
BPT	Manisha Sarkar	A Grade	70.97%	Gold
BOPTM	Trisruta Deb	A Grade	69.94%	Gold
BMLT	Arshiya Dey	A Grade	68.43%	----
BHM	Debasmita Ganguly	O Grade	82.37%	Gold
BMTOT	Pallavi Sil	A Grade	67.03%	Gold
BMRIT	Shubham Kumar Singh	O Grade	78.71%	Gold
BMRT	Pankaj Kumar Paul	O Grade	78.85%	Gold

Report of Placement Committee

In our journey of 10 years, TIPS placement cell has not kept any stone unturned for coordinating class room teaching and professional exposure for students in the field of Paramedical Sciences.

It is well proven that paramedic professionals are the backbone of modern super specialized healthcare sectors. In-depth knowledge and clinical exposure, keeps students miles ahead in the competitive professional field in both Government & corporate sectors.

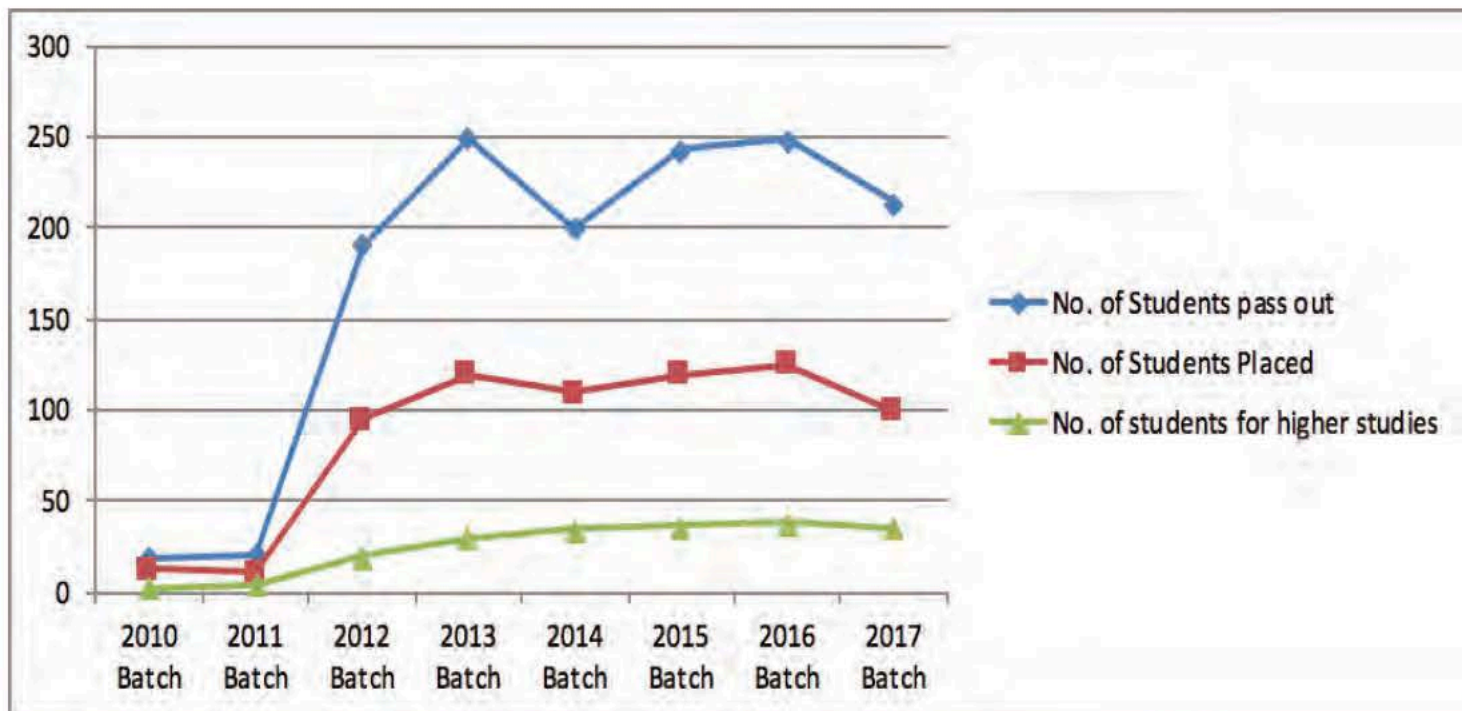
This is one of the reasons why TIPS has students from 16 different states across India, who came Tripura to study these graduate courses.

Till date approx. 1200 paramedics have passed out from TIPS & working in different renowned Government & corporate healthcare sector in India & abroad. Many of those have also completed their higher studies for better professional proficiency and also serving as faculties in different academic institutes.

We continuously strive for an erudite world and that thought of us has encouraged us to initiate these professional courses to shape and craft careers of young aspirants in ever demanding health care professions.

We are proud to acknowledge that our pass out students are working in different State and central Government institutions along with renowned corporate hospitals pan India. AIIMS Delhi, Bhopal, Bhubneswar, Calcutta Medical college, GBP Hospital, IGM Hospital, Apollo group, NH group, ILS group, Medica Super Specialty Hospital, HCG Group, Sterling group, Manipal Group, Neotia Group, B. L. Kapoor, Agarwal Eye Hospital Group, Shankar Netralaya Eye Hospitals, and many other are amidst the few to name for, from the list of enrolled hospitals.

It is our immense pleasure that our students are not only working across India with grace and fame but also some of them are successfully working abroad like in Kuwait, Oman, Mauritius holding the name of the institute high.



Disciplinary Committee

The discipline in School and College of Nursing is maintained. Till date there is no need for taking disciplinary action. The School and College of Nursing smoothly.

Anti-ragging Committee

Ragging is the term used for the so-called "initiation ritual" practiced in higher education institutions in South Asian countries, including India, Pakistan, Bangladesh and Sri Lanka. The practice is similar to hazing in North America, bizutage in France, praxe in Portugal and other similar practices in educational institutions across the world. Ragging involves abuse, humiliation or harassment of new entrants or junior students by their seniors. It often takes a malignant form wherein the newcomers may be subjected to psychological or physical torture.

There is no incidence regarding ragging. After join in the first in both School and College of Nursing and before fresher's welcome party we arrange sensitization program on ant ragging measures involving all students and faculty members.



Report of Cultural Committee

The colonial hands had captured India and made it its territory for a long and hard period of 200 years. The freedom struggle had made drastic disturbances in the geographic, financial and mental conditions of the needy. Till the end of 20th century, development of India had been taking place in just some concentrated and dense part of it. But when the world opened eyes after the tick of the clock's hands for the 1st January of 2000, it remained completely astonished! Now the development of India was distributed towards the far away parts too. And one such state was TRIPURA----a densely populated north-eastern remote city. People here were very new to this generation and had less knowledge about the edu-tech advancements in the ground of professionalism. But to guide them and lay their platform to pave the pathway towards the East,

came the DS Group/Foundation with their brand new Paramedical Institution T-I-P-S---such a simple though catchy word!!Is n't it?This institution had groomed and nourished children starting from just half a cent of people with only a meagre number of faculties. But these teachers had been so focused and fabulous regarding their teaching and practical skills that students never wanted to put a full-stop in their 3-4 years of college journey which had been an Alma Mater to them. Even with such little amount of faculties the HEAD of the Institute had realized the importance of Indian festivals and programs for various occasions like the observation of Republic Day,Independence Day,Saraswati Puja,Viswakarma puja,Teacher's Day,Foundation Day celebration etc. including bidding farewell to the 4th year students. So,they came up with a new group of members for the cultural wing. This committee had been organizing the festives starting with just few members to a high of more senior members without creating any academic halt for the students to flourish out the intelligence, creativity and talents of the students,all throughout the year by different activities like singing, dancing, drawing, recitation, essay writing, debate etc. Their hard works and efforts for the unveiling of the talents along with the coordination of students had harvested every drop of sweat they had dropped on the bricks and floors of TIPS abundantly.It had been organizing fantabulous cultural functions and the farewell of last year students that even the Legislative members ,inspite of their busy and hard schedule, never denied to attend the program. The rehearsal for the colorful cultural program of Foundation Day is indeed an elaborate affair. Every year, the faculties,students and other staff members of TIPS come together in a beautiful fashion to choreograph a magnificent program to entice you all. During this whole process, our multi-fetched students never compromise on their main priority-----that is their regular classes. What a wholesome experience that has been for everyone!

And now the cultural committee has started to prolonged the period of Foundation Day celebration from one day to ten days!!!after a heavy long period of ten years since it's foundation in 2009.While we honed our individual skills we had also become better team players and made some lasting bond!

The hard works and efforts of cultural committee members has been a glorious title for TIPS besides it's astonishing academic results that the whole India bows to its works,achievements and swags of teaching and appreciate it with heartfelt gratitude and pride!!!





2016





2017



Our Gold Medalists

YEAR OF PASSING OUT	SL. NO.	NAME OF THE STUDENTS	COURSE
2012	1	Sibabrata Acharjee	BHM
	2	Jyoti Chakraborty	BMLT
	3	Tapashree Majumder	BMRT
	4	Jayanta Debnatha	BMRT
	5	Saddam Hossain Khan	BMT-OT
2013	1	Palash Patari	BMLT
	2	Jelisa Paul	BHM
	3	Subrata Roy	BMRT
	4	Dipan Nath	BMRT
	5	Nabamita Shome	BMT-OT
	6	Payel Poddar	BOPTM
	7	Papia Rani Baul	BPT
2014	1	Sarbari Saha	BMRT
	2	Amlan Dasgupta	BMT-OT
	3	Satadru De	BHM
	4	Tamalika Debnath	BOPTM
	5	Krishna Das	BPT
2015	1	Moumita Das	BMLT
	2	Wilson Hrangkhawl	BMRT
	3	Litan Debroy	BMT-OT
	4	Prasanna Debbarma	BHM
	5	Kajal Mishra	BMRT
	6	Sunanda Bhowmik	BPT
	7	Bijoyeta Singha	BOPTM
2016	1	Mekkir Gini	BMRT
	2	Litan Das	BHM
	3	Farid Uddin	BMT-OT
	4	Jaydip Debnath	BMRT
	5	Deepika Samanta	BOPTM
	6	Sanghamitra Bhattacharjee	BPT
2017	1	Debapriya Chakraborty	B.Sc. Nursing
	2	Manisha Sarkar	BPT
	3	Trisruta Deb	BOPTM
	4	Shubham Kumar Singh	BMRT
	5	Debasmita Ganguly	BHM
	6	Pallavi Sil	BMT-OT
	7	Pankaj Kumar Paul	BMRT

Flavors of Merriment ... Our Cakes

Cake is a term with a long history (the word is of Viking origin, from the Old Norse kaka). Ancient Egypt was the first culture to show evidence of true skill in baking, making many kinds of bread including some sweetened with honey. All special occasion and celebrations are always dull without a beautiful cake. This sinful piece of taste makes any normal party more interesting and spread happiness everywhere.

Our cake has always been the center of our attraction since the first time we started celebrating our foundation day. 24th August is not only a date to embark our Foundation Day with grace and joy but it's also about our "Foundation Day Cake" that denote and excel our bonding and excitement too.

In this modus operandi of 10 years since inception we have faced thick and thin but the endless factor of joy has always been our "Cake". This sinful indulgence has crossed its way from a single layer to multi layers, size with new designs thus portraying our gradual growth and spread across in all squares.

The outsized delicious looking cake is not just a cake for any member of TIPS fraternity. It's our portion of emotions, joy, happiness and craziness that we all indulge into and wait eagerly for this special sinful guest to come and take over the center of the table vibrantly decorated just for it. The whole day long program on this day is centralized for the "Foundation Day Cake". The moment it enters our campus head high the screams of joy portrays the height of excitement that we all hold up till this moment.

2010



2011



2012



2013



2014



2015



2016



2017



“Coincidences mean you're on the right path.”

— Simon Van Booy,

Last year our center of attraction “Our Cake” was added on with a graduate hat that added much of cheers amidst all of us as the shouts of excitement said it all. May be this was a mere coincidence but the graduate hat cake really did a wonder and the same academic year our students won gold medals boasting us up more and enriching our institute with accolades.

We wish more of this sinful indulgence in our future days in large to larger shapes thus spreading our name across in length and width all over the globe.

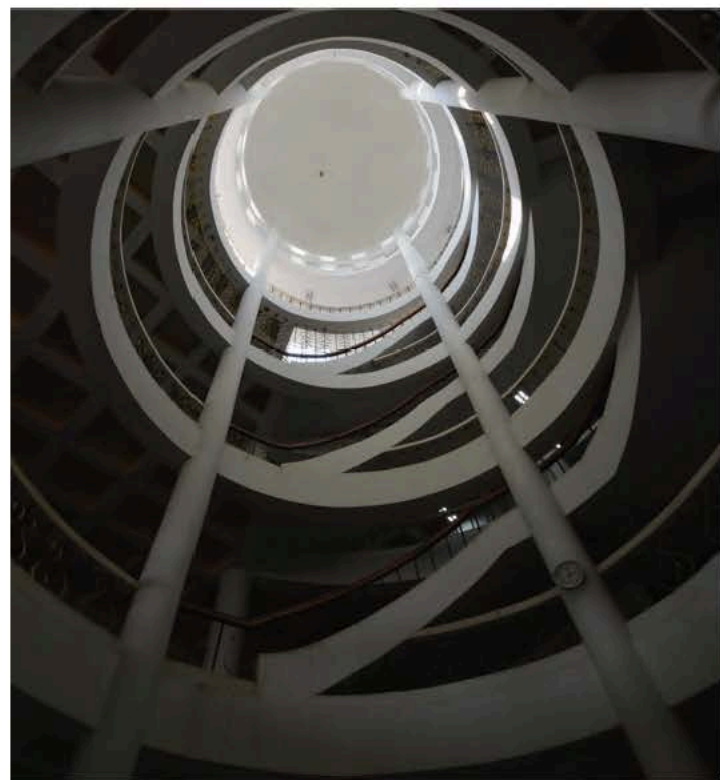


TIPS : The linking bridge

One of the most interesting stages in life that gives you an opportunity to explore is the 'college phase.' Life at college is the time when the teenage years end and we all dive deep into the ocean of new beginnings and possibilities. This golden period better equips you for all the challenges you'll face in life and creates a strong foundation of knowledge. College life prepares you for all of this. It is a perfect blend of joy and hardships. You meet different people, you interact with them, you learn about their cultures and grow as a person. You will understand how to talk to different people, how to judge their behavior, thus helping you with important life skills.

Our college Tripura Institute of Paramedical Sciences is not just an Institute where students are shaped and crafted but it's an extended family for all of us. All members of TIPS fraternity are interconnected by this strong string of attachment named TIPS.

The enormous building, the long corridors, the large classrooms, well equipped labs stand head high portraying our glory today which was never an easy task for all of us to achieve. With each passing day breaking hurdles of tough times we gradually could see this silver lining and yes, we all members of TIPS, our students, our staffs, our management today boast about our accomplishments.



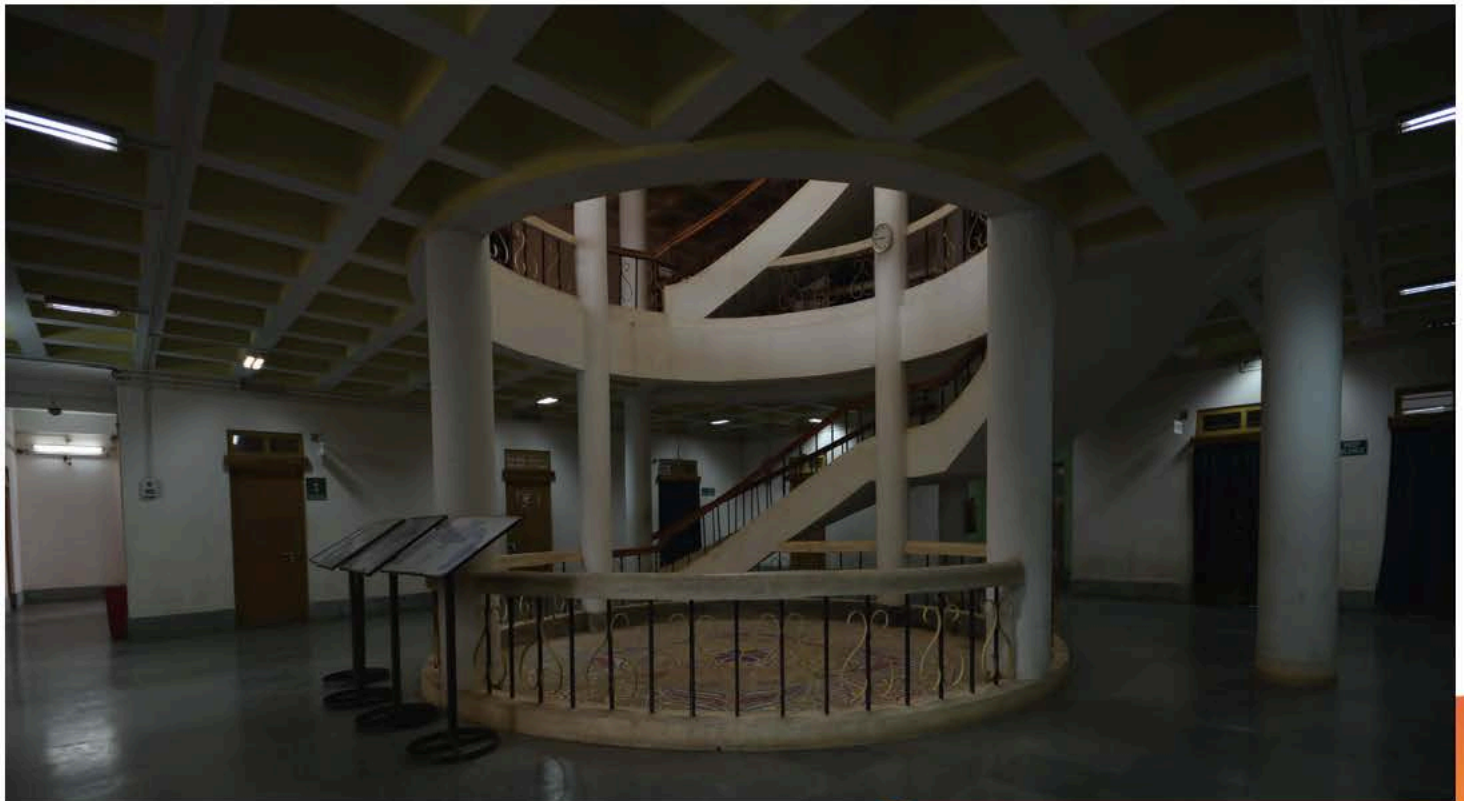
The lighted student filled classes teach us unity in diversity when we see students from each corner of the nation bonded strong together as classmates, friends, seniors, juniors. The blackboard shows us a way of light towards education when white chalks are scribbled all over with notes, points etc. going along together yet governing them to be disciplined in all steps whenever needed.

The inevitable feelings of oneness is when we see our faculty members crunching fingers with worried faces when our students sit silent awaiting for question papers at the time of exams. A whole academic year passes through with a blink of an eye and we see our young aspirants gradually grooming up to skilled paramedics. That is a moment of joy that stays silent in all our hearts as we still know that the best is yet to come and yes at the end of a whole academic era we see these young aspirants as skilled achievers standing head high thus making us proud.

We have witnessed the firmest teacher to break down to bid adieu to our passing out students. This teaches us that be strong in outer shell but emotions are always deep inside to be restored and cherish. Age has stopped in our Institute as we have seen the most senior member also to take on the lead whenever needed forgetting the physical constraints that's what love and care all about. We have seen the, most energetic young next gen teachers to bond up with students as friend, cracking jokes, making fun, laughing aloud together yet governing them to be disciplined in all steps whenever needed.

We have seen group of students hanging out in different corridors corners at recess breaks, gossiping, discussing and at time arguing but suddenly there is a pin drop silence whenever any senior member may be management personal, faculties or any other senior staff is passing or crossing the same path. This is what respect is all about it just not a mere word for our students instead we have seen them following this term in true sense.

The teacher's room has witnessed discussions of all types and it has witnessed the care for each student too. The foremost priority for each one sitting inside this room is always our students their likes, dislikes, wishes, faults has been measured in the same scale as we measure and think about upbringing about our own kids.





During the sports competitions we have witnessed the strength, energy and zeal of each one including management personal to teachers to students to staff thus teaching us togetherness is the mantra of life. As we all believe that togetherness is a very important ingredient to family life and TIPS family is no apart from that. So together we stand and divided we fall is our mantra to make our strings more and more attached with each passing time.

We have viewed the most active placement cell here in TIPS always striving to encourage our students towards there career-o-graph. A midnight call of emergency is always taken on a very serious note despite the wee hours that has taught us that love and affection is more than time and boundaries. Each year the farewell gathering of our students takes us to a world of emotions where their eyes are wet and moist yet glazing towards their future ahead. Holding up at that moment really becomes tough for every one present there in the auditorium. This truly is what bonding is all about and more than the tough lessons that has been taught, the strict schedule they have been kept under, the rebuke, the restrictions, the rules, the discipline, the extra class sessions and many more.



In these 10 years we have seen many joining and adieus at the same time, new faces becoming old, fresh faces came in with time , faces changed but all were broadly embraced by our Institute. We felt sad whenever we had to bid a bye to anyone of our members as we felt that it's our personal loss but along with that we have also embraced new ones equally gave them a space within to be a member of our family



The strictest teacher to script the most hilarious comedy play for our program making all giggle and laugh aloud and directing the whole play, casting perfect match for each character and acting himself has taught us that whatever we are, where ever we are and who ever we are smiling is the best healer after any tedious day. Any members of TIPS have never left any scope to showcase their hidden talents on stage thus spreading the aura of entertain and teaching us all to be open and free up oneself when it comes to your talent however small it may be.



This wonderous journey of 10 years we have seen the most esteemed persona from the management guiding us all through whenever we felt jumbled and showing us all a way, untying the jumbled knots and making us more focused by morally boosting up our zeal to work together. Indifferences are part of any family so it's no different here but still the most vital part is that we were guided smoothly in these times to

A bright sunny morning and all busy in their own platform of work, suddenly the messenger on cell phones of all members of TIPS started buzzing with images showing our students injured, some bleeding badly, some being carried on stretcher by the people of emergency response team. All one of us was more than scared and horrified. All busy calling each one about this sudden mishap. Almost all tensed and worried, and the parameters of tension reaching highest points it seemed a dooms day for all TIPS members. Then suddenly the curtain raised and it was informed to all that that was just a mock drill and that felt like a fresh air to each one in TIPS near or far. That very moment we realized that the emotional bond that we all share is deep enrooted within and with each passing time it has bonded strong to stronger thus making us a family deeply rooted and connected.

This wonderous journey of 10 years we have seen the most esteemed persona from the management guiding us all through whenever we felt jumbled and showing us all a way, untying the jumbled knots and making us more focused by morally boosting up our zeal to work together. Indifferences are part of any family so it's no different here but still the most vital part is that we were guided smoothly in these times to forget these indifferences and work together as a TEAM. The source of our strong togetherness is the motto: "Together we stand & Divided we fall." That is what we felt once stepping the threshold here in TIPS as the aura of this motto is so strong here that one is convinced to follow it always.

A bright sunny morning and all busy in their own platform of work, suddenly the technical messenger of all members of TIPS started buzzing with images showing our students injured, some fractured, some bleeding badly all one of us was more than scared and horrified. All busy calling each one about this sudden mishap. Almost all tensed and worried, and the parameters of tension reaching highest points it seemed a dooms day for all TIPS members. Then suddenly the curtain raised and it was informed to all that that was just a mock drill and that felt like a fresh air to each one in TIPS near or far. That very moment we realized that the emotional bond that we all share is deep enrooted within and with each passing time it has bonded strong to stronger thus making us a family deeply rooted and connected.

Long back in 2011 the moment I saw this enormous state of the art building. I was mesmerized and I think this happens to each one of Us the moment we enter or visit TIPS. Since then it's been a journey of mixed bag mostly containing joyous and wonderous moments. The experience at TIPS has taught me one fundamental thing – life is unpredictable but at the same time Life makes you feel contended. It might be good, it might be bad, it might be weird, and it might not interest you, but expect anything to happen at any time For example, you might have a wonderful job this moment, and be fired the very next moment and also there comes a moment when you no more think and count on change in career growth as you know that this particular place is the final destination in your career-o-graph.

Worry does not empty tomorrow of its sorrow, it empties today of its strength.

-----Corrie ten Boom





The Seasons of Life

There was a man who had four sons. He wanted his sons to learn to not judge things too quickly. So he sent them each on a quest, in turn, to go and look at a pear tree that was a great distance away.

The first son went in the winter, the second in the spring, the third in summer, and the youngest son in the fall.

When they had all gone and come back, he called them together to describe what they had seen.

The first son said that the tree was ugly, bent, and twisted.

The second son said no – it was covered with green buds and full of promise.

The third son disagreed, he said it was laden with blossoms that smelled so sweet and looked so beautiful, it was the most graceful thing he had ever seen.

The last son disagreed with all of them; he said it was ripe and drooping with fruit, full of life and fulfilment.

The man then explained to his sons that they were all right, because they had each seen but one season in the tree's life.

He told them that you cannot judge a tree, or a person, by only one season, and that the essence of who they are – and the pleasure, joy, and love that come from that life – can only be measured at the end, when all the seasons are up.

If you give up when it's winter, you will miss the promise of your spring, the beauty of your summer, fulfilment of your fall.

Don't judge a life by one difficult season. Don't let the pain of one season destroy the joy of all the rest.

11 Interesting Facts on India That You Had No Idea About

"India is, the cradle of the human race, the birth-place of human speech, the mother of history, the grandmother of legend, and the great grandmother of tradition. Our most valuable and most instructive materials in the history of man are treasured up in India only." - Mark Twain.

1. A floating post office

India has a floating post office in Dal Lake, Srinagar, which was inaugurated in August 2011. India has the largest postal network in the world with over 1, 55,015 post offices. A single post office on an average serves a population of 7,175 people.



2. Kumbh Mela gathering is visible from space

The 2011 Kumbh Mela was the largest gathering of people with over 75 million pilgrims. The gathering was so huge that the crowd was visible from space.



3. The highest cricket ground in the world

At an altitude of 2,444 meters, the Chail Cricket Ground in Chail, Himachal Pradesh, is the highest in the world. It was built in 1893 and is a part of the Chail Military School.

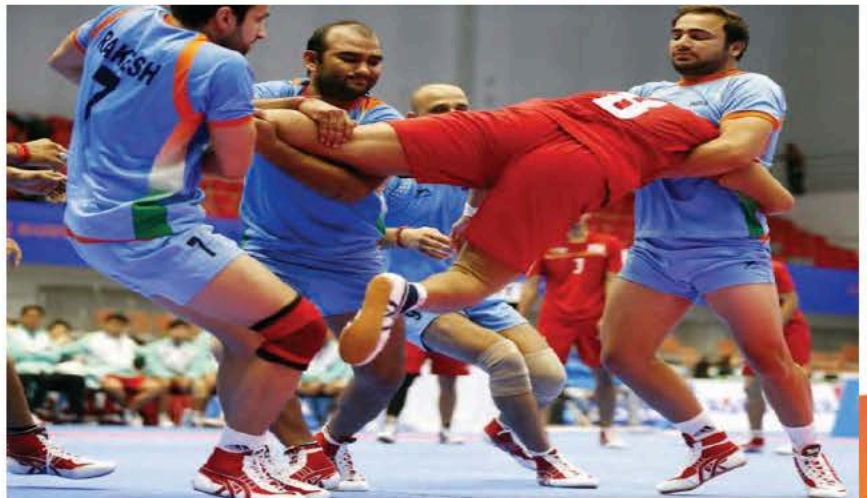


4. Shampooing is an Indian concept

Shampoo was invented in India, not the commercial liquid ones but the method by use of herbs. The word 'shampoo' itself has been derived from the Sanskrit word champu, which means to massage.

5. The Indian national Kabaddi team has won all World Cups

India has won all 5 men's Kabaddi World Cups held till now and have been undefeated throughout these tournaments. The Indian women's team has also won all Kabaddi World Cups held till date.



6. Water on the moon was discovered by India

In September 2009, India's ISRO Chandrayaan-1 using its Moon Mineralogy Mapper detected water on the moon for the first time.

7. Science day in Switzerland is dedicated to Ex-Indian President, APJ Abdul Kalam

The father of India's missile program had visited Switzerland back in 2006. Upon his arrival, Switzerland declared May 26th as Science Day.

8. India has a spa just for elephants

Elephants receive baths, massages and even food at the Punnathoor Cotta Elephant Yard Rejuvenation Centre in Kerala. Now that's a BIG step for the country.

9. India is the world's second-largest English speaking country

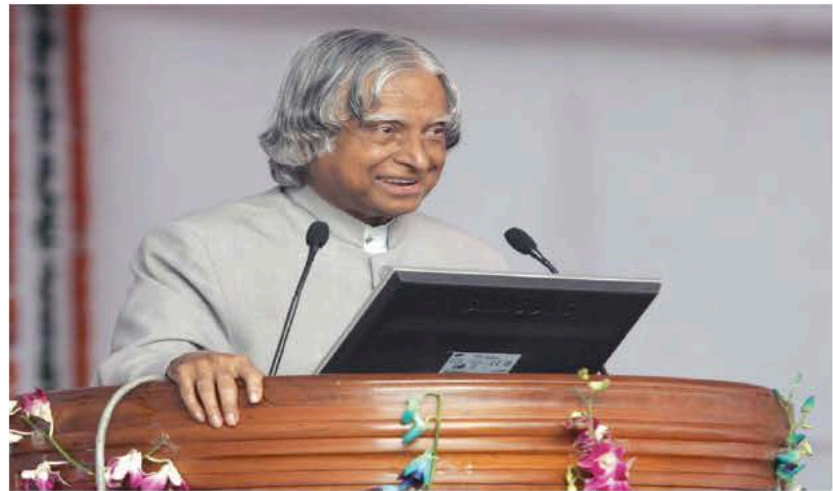
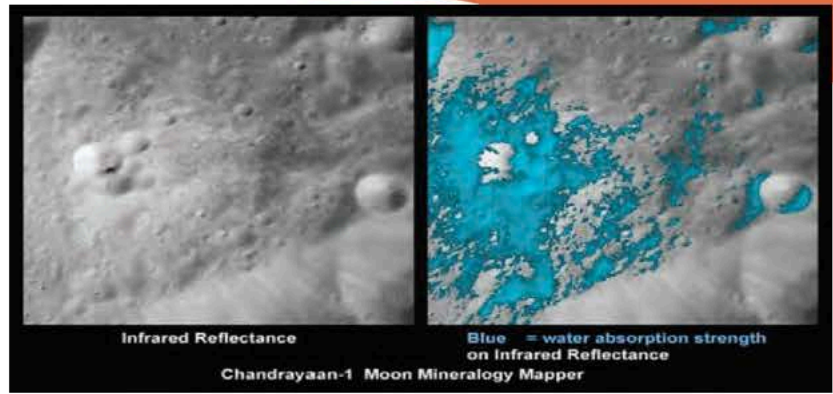
India is second only to the USA when it comes to speaking English with around 125 million people speaking the language, which is only 10% of our population. This is expected to grow by quite a margin in the coming years.

10. A special polling station is set up for a lone voter in the middle of Gir Forest

Mahant Bharatdas Darshandas has been voting since 2004 and during every election since then, a special polling booth is set up exclusively for him as he is the only voter from Banej in Gir forest.

11. The first rocket in India was transported on a cycle

The first rocket was so light and small that it was transported on a bicycle to the Thumba Launching Station in Thiruvananthapuram, Kerala.



MOST RENOWNED PAINTINGS –BY LEONARDO DA VINCI

Debasmita Saha, BMRT 2nd year

THE MONALISA: -

Any list of most famous paintings would be incomplete without the mention of the MONA LISA the marvelous creation of renowned painter Leonardo da Vinci. It is a half-length portrait painting by the Italian Renaissance artist Leonardo da Vinci. This painting is thought to be a portrait of Lisa Gherardini, the wife of Francesco del Giocondo. It had been believed to have been painted between 1503 and 1506. It was acquired by King Francis 1 of France and is now the property of the French Republic, on permanent display at the Louvre Museum in Paris since 1797.



THE MONALISA

GINEVRA DE BENCI:-

Ginevra de Benci is a portrait painting by Leonardo da Vinci of the 15th century. The oil-on-wood portrait was acquired by the National Gallery of Art in Washington, D.C. in 1967. Ginevra de Benci a well-known young Florentine woman, is universally considered to be the portrait's sitter. Leonardo painted the portrait in Florence between 1474 and 1478. The portrait is one of the highlights of the National Gallery of Art, and is admired by many for its portrayal of Ginevra's temperament.



GINEVRA DE BENCI

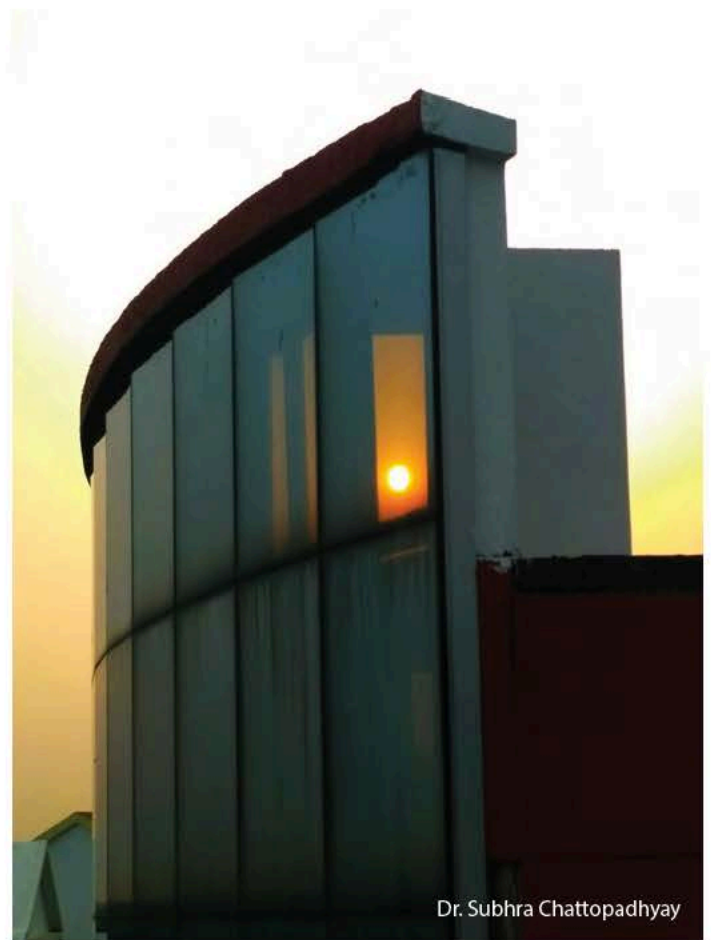


LADY WITH AN ERMINE

LADY WITH AN ERMINE:-

It is a painting by Leonardo da Vinci from around 1489-1490 and one of the Poland's national treasures. The subject of the portrait is Cecilia Gallerani painted at a time when she was the mistress of Ludovico Sforza, Duke of Milan, and Leonardo was in the service of the duke. The painting is kept in National Museum of Krakow, Poland.

Different Moods of TIPS





Nabarup Debnath



Dr. Subhra Chattopadhyay



Jimli Paul





Nabarup Debnath



“Photography is a way of feeling, of touching, of loving. What you have caught on film is captured forever... It remembers little things, long after you have forgotten everything.” — Aaron Siskind

Photography is the serious art of all times from past to present. Photographers are just like writers and other artists who use a set of rules to convey meaning in their work. In today's society, photography plays an important role to our visual minds and it has always been considered to have a special status for truthfully recording the world and making people perceive photographs as something real.

Photographers are no less than writers and other artists as they capture candid moments which is locked for lifetime. Time passes away but photographs seem to hold on that very moment for each one of us. A photograph clicked is not mere a picture to be framed or kept in albums but it has a much deeper meaning in different aspect as the saying goes ‘A photograph says a thousand words’.



TRIPURA INSTITUTE OF PARAMEDICAL SCIENCES



The Scientific **TIPS!**

Choking and Foreign Body Airway Obstruction

Abstract

The angle at which thrusts were performed (upthrust vs circumferential) did not affect intrathoracic pressure. Self-administered abdominal thrusts produced similar pressures to those performed by another person. Chair thrusts, where the subject pushed their upper abdomen against a chair back, produced higher pressures than other manoeuvres. Both approaches should be included in basic life support teaching.

Key words: Foreign bodies, Management, Prevention

Background

Foreign body airway obstruction (FBAO) is a common cause of death, particularly in older people. The National Safety Council USA reports that FBAO is the fourth leading cause of unintentional injury death. According to Injury Facts 2017, choking is the fourth leading cause of unintentional injury death. Of the 5,051 people who died from choking in 2015, 2,848 were older than 74.

European Resuscitation Council guidance for treatment of FBAO in conscious adults is a combination of back blows and abdominal thrusts with no preference on order. The Australian and New Zealand Resuscitation Councils recommend back blows and chest thrusts for the management of FBAO in conscious adults, but advise against abdominal thrusts, citing concern about complications.

External pressure on the abdomen should be transmitted through the diaphragm regardless of where it is applied, so there is no theoretical reason why force needs to be directed upwards.

Choking is the physiological response to sudden obstruction of airways. Foreign body airway obstruction (FBAO) causes asphyxia and is a terrifying condition, occurring very acutely, with the patient often unable to explain what is happening to them. If severe, it can result in rapid loss of consciousness and death if first aid is not undertaken quickly and successfully. Immediate recognition and response are of the utmost importance.

Choking due to inhalation of a foreign body usually occurs whilst eating; it need not have been a formal 'sit-down' meal - a snack eaten 'on-the-go' or chewing gum can also be inhaled

Recognition

Because recognition is the key to successful outcome, "Are you choking?" is the important question to ask the conscious victim. This at least gives the victim who is unable to speak the opportunity to respond by nodding! Consider the diagnosis of choking particularly if:

- The episode occurs whilst eating and onset was very sudden.
- The victim is an adult - may clutch his or her neck, or points to throat.
- The victim is a child - there may be clues - eg, seen eating or playing with small items just before the onset of symptoms.



Pranjal Kanti Shil
B.Sc. Nursing 3rd

CONSCIOUS VICTIM

If victim **CAN** breathe, cough or speak—**DO NOT INTERFERE.**

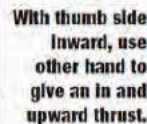
If victim **CANNOT** breathe, cough or speak—**give quick upward thrusts (grip above waist but below ribs).**



(Avoid pressing on the bottom of the breastbone.)



Hold fist with thumb tucked in.



With thumb side inward, use other hand to give an in and upward thrust.



Repeat thrust steps until effective or until victim becomes **UNCONSCIOUS.**

UNCONSCIOUS VICTIM

Phone 911 or other emergency response number or send someone to call.



1
Open the airway. Look for foreign object. If one is seen, remove it (head tilt, chin lift). Start CPR.



2
Attempt two breaths.



3
Do 30 chest compressions (Place heel of one hand on center of breastbone and heel of second hand on first hand).

Repeat steps 1, 2 and 3 until victim starts breathing or until emergency/medical help arrives.

Assess severity

Mild obstruction

- The patient can breathe, cough effectively and speak.
- Children are fully responsive, crying or verbally respond to questions; may have a loud cough (and be able to take a breath before coughing).[3]

Severe obstruction

This is indicated by:

- The victim being unable to breathe or speak/vocalise.
- Wheezy breath sounds.
- Attempts at coughing that are quiet or silent.
- Cyanosis and diminishing conscious level (particularly in children).
- The victim being unconscious.

Incidence

Choking is a risk whenever food is consumed. FBAO represents a true medical emergency in adults, with a mortality rate of just over 3%. FBAO also has a unique demography - 80% of cases are below the age of 3, with a peak frequency in the 1- to 2-year age group.

Risk factors

Possible risk factors include:

- Old age
- Poor dentition
- Alcohol consumption
- Chronic disease
- Sedation
- Eating risky foods

FBAO was diagnosed correctly in fewer than 10% of cases where help was summoned.[6]

The elderly are a particularly vulnerable group and FBAO is associated with:[6]

- A higher risk with soft/slick foods.
- Agomphiasis (absence of teeth).
- Neurological impairment.

Management

- In mild obstruction, encourage the patient to continue coughing; however, do nothing else except monitor for deterioration.
- In severe obstruction in a conscious patient:
 - Stand to the side and slightly behind the victim, support the chest with one hand and lean the victim well forwards
 - Give up to five sharp back blows between the shoulder blades with the heel of your other hand (checking after each if the obstruction has been relieved).
 - If unsuccessful, give up to five abdominal thrusts. Stand behind the victim (who is leaning forward), put both arms around the upper abdomen and clench one fist, grasp it with the other hand and pull sharply inwards and upwards.
 - Continue alternating five back blows and five abdominal thrusts until successful or the patient becomes unconscious.
- In an unconscious patient:
 - Lower the patient to the floor.
 - Call an ambulance immediately.
 - Begin CPR (even if a pulse is present in the unconscious choking victim).

Complications

- Inhaled foreign body: after successful treatment for choking, foreign material may still be present in the upper or lower airways and cause complications such as bronchiectasis or lung abscess later. Anyone with a persistent cough, difficulty swallowing, or with the sensation of an object being still stuck in the throat should therefore be referred to A&E. CXR may show an opacity that requires removal at bronchoscopy or atelectasis. In children, clinical features and radiological findings may have a poor correlation with findings at bronchoscopy. If a foreign body is suspected, bronchoscopy should be performed at an early stage for best results.
 - Iatrogenic: abdominal thrusts can cause serious injuries (eg, gastric and splenic rupture)
- All victims receiving abdominal thrusts require examination of the abdomen with a particular view to visceral injuries.
- Hypoxic brain injury and death.

References:

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2. Adult Choking Treatment Algorithm; Resuscitation Council (UK), 2015
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4. Soroudi A, Shipp HE, Stepanski BM, et al; Adult foreign body airway obstruction in the prehospital setting. *Prehosp Emerg Care.* 2007 JanMar;11(1):25-9.

A Care bundle for pressure ulcer treatment in Intensive Care units (ICU)

Abstract

Pressure ulcers (PUs) are localized injuries of the skin or underlying tissue caused by prolonged pressure, exposure to shear forces or friction. PUs represents a major concern for hospitalized patients and the health professionals responsible for their wellbeing. intensive care in it (ICU) patients are at high risk of PU development, and the development of PUs can significantly extend the length of time a patient must remain in the ICU. Patients with PUs experience significantly increased morbidity, mortality and financial burden. A significant amount of evidence has accumulated indicating that PU prevention is an essential component of patient care.



Anirban Chanda
B.Sc Nursing- 2nd year

Key words: Pressure ulcer, Care bundle, Intensive care unit

Introduction

Pressure ulcer (PU) also known as pressure sores, are localized injuries of the skin or underlying tissue that most often occur over bony prominences and which can be caused by any combination of pressure, shear forces of friction. Pus are internationally recognized as an important and mostly avoidable indication of health care quality. PU severity is described using a stage 1st through 4th classification system, with stage 1st represent the earliest stages of PU formation and stage 4th representing the severest grade of Pus that are characterized by full thickness tissue loss and exposed bone, tendon or muscle tissue. Pus occur most frequently over bony prominence, the most common PU vulnerable location include the sacrum, coccyx, heels & ear.

Patients' admitted to ICUs are at a higher risk of developing Pus than patients admitted to general care. A review of ICU related literature from 2000 to 2005 indicated a PU prevalence in thee ICU OF 4-49% and an incidence of 3.8-40.4%. The 2009 international pressure ulcer survey prevalence indicated that facility acquired prevalence rates were highest (12.10% in the medical ICU).

What is a care bundle?

A "care bundle" is also sometimes referred as a bundle of care, a patient care bundle, a prevention bundle, or a nursing cluster bundle.

Applying the care bundle

1. Risk assessment
2. Skin assessment
3. Surface Support
4. Nutrition
5. Repositioning

Conclusions

The evidence-based care bundle includes five care measure as said or indicated before: - Risk Assessment skin assessment, surtax support, Nutrition Reposting, each of these Clements is essential of the care bundle, a team inducing nurses and doctors should be assembled and given the appropriate education I training to execute the care bundle in their ICU. For care bundle success, compliance with all the requirements of the care bundle must be strictly observed.

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Plastic eating enzyme accidentally created by scientists could help solve pollution crisis

Abstract

A student may have found a solution to one of the world's most urgent environmental crises – breeding bacteria capable of “eating” plastic and potentially breaking it down into harmless by-products. The microbes degrade polyethylene terephthalate (PET) – one of the world's most common plastics, used in clothing, drinks bottles and food packaging.

Key words: Crisis, Plastic, Pollution

Introduction

Scientists have created a substance capable tackle of “eating” plastic that could help tackle the world's pollution problem. The Substance is based on an enzyme – a “biological catalyst”- first produced by bacteria living in a Japanese recycling centre that reseats chess suggested had evolved it to eat plastic. Dubbed PET plastic for its ability to break down the PET plastic used to make drinks bottles, the enzyme accelerated a degradation process that would normally take hundreds of years. Fine- tuning this naturally produced enzyme allowed a research team to produce something capable of digesting plastic more effectively than anything found in nature. By breaking down plastic into manageable chunks, the scientists suggest their new substances could help recycle millions of tonnes of plastic bottles. Plastic is notoriously resistant to natural degradation and the discovery of the Japanese plastic- eating bacteria in 2016 was heralded by experts and commentators alike as a potential natural solution to plastic pollution. While attempting to verify these claims, university of Portsmouth biologist professor John Mc Gechan and his colleagues accidentally created a super powered version of the plastic eating enzyme. Doing so ramped up the ability of the enzyme to degrade PET and gave it the ability to degrade an alternative form of PET known as PEF.

Researchers from Britain's University of Portsmouth and the US Department of Energy's National Renewable Energy Laboratory made the discovery while examining the structure of a natural enzyme thought to have evolved in a waste recycling centre in Japan.

"Although the improvement is modest, this unanticipated discovery suggests that there is room to further improve these enzymes, moving us closer to a recycling solution for the ever-growing mountain of discarded plastics,"

"Being able to see the inner workings of this biological catalyst provided us with the blueprints to engineer a faster and more efficient enzyme."

The research was led by postgraduate student Harry Austin and published in the journal Proceedings of the National Academy of Sciences.



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1st year B.Sc. Nursing





“It should allow selective deconstruction of PET into its constituent components and therefore lead to a higher value approach to recycling such materials where mechanical recycling is not possible. In such cases, current approaches involve less sophisticated methods such as incineration.”

The discovery has been welcomed enthusiastically by other scientists, who nevertheless cautioned there would be a long way to go before these enzymes are widely applied in the recycling industry.

“Oil-derived plastics and polymers are resistant to degradation and their accumulation in the environment is an appalling problem,” said Professor Douglas Kell, a bioanalytical scientist at the University of Manchester.

“Evolving enzymes to degrade such plastics is a high priority.”

Conclusion

Few could have predicted that since plastics became popular in the 1960s huge plastic waste patches would be found floating in oceans or washed up on once pristine beaches all over the world. We can all play a significant part in dealing with the plastic problem, but the scientific community who ultimately created these 'wonder-materials', must now use all the technology at their disposal to develop real solutions.

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SIMPLE GLYCERINE MICROSCOPE

Md. Abdul Halim
BMT(OT) 1st Year

SCIENTIFIC PRINCIPLE:-

Through this machine we can see a multiple greater size of tiny part of an object. Here the task of magnifying of an object is done by glycerine that is working as a lens. We can adjust fine vision by setting adjustment screw.

INTRODUCTION: -

Using a one drop of glycerine we can easily make a simple glycerine microscope. The cost of this microscope will be very low with the help of this self-made simple microscope we can provide preliminary microscopic vision of an object or tiny part of onion cell, potato cell etc. That is very helpful for the students of class 6 to 10 in every rural side area schools. Besides if we want to use accompany made simple microscope widely there needs us huge amount of money for the purpose.

This microscope can be made in various types of metal, woods and other types of fibre plastic, the cost will depend on the basis of it's used material. Here it is made

by the iron: - 500 -600 Rupees.

by the Wood :- 200-300 Rupees.



Wooden Model



Iron Model

COMPONENTS: -

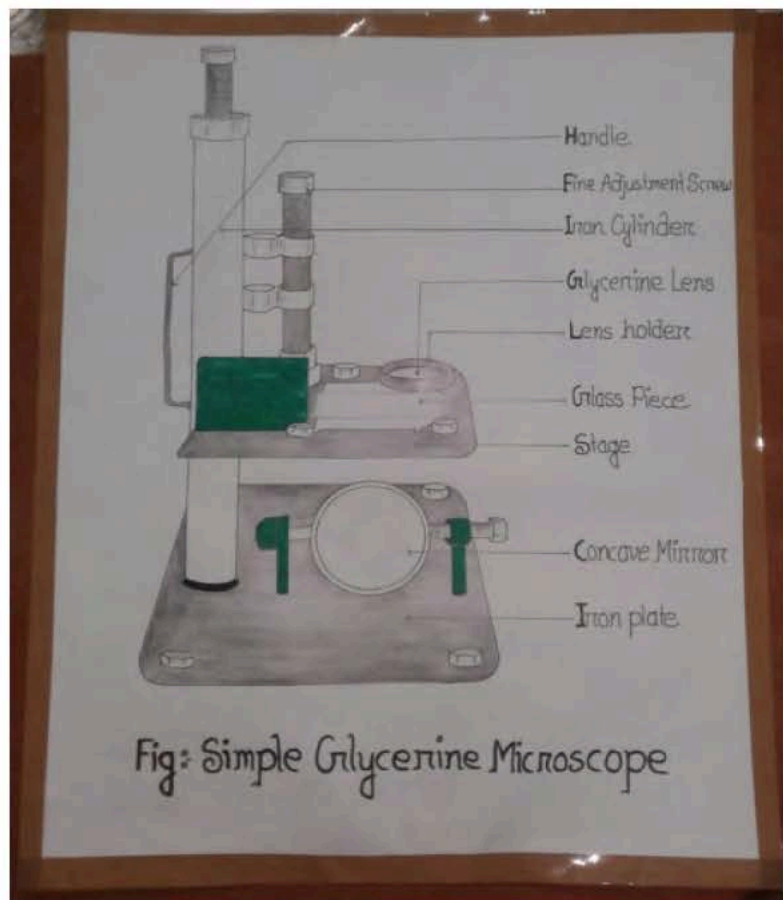
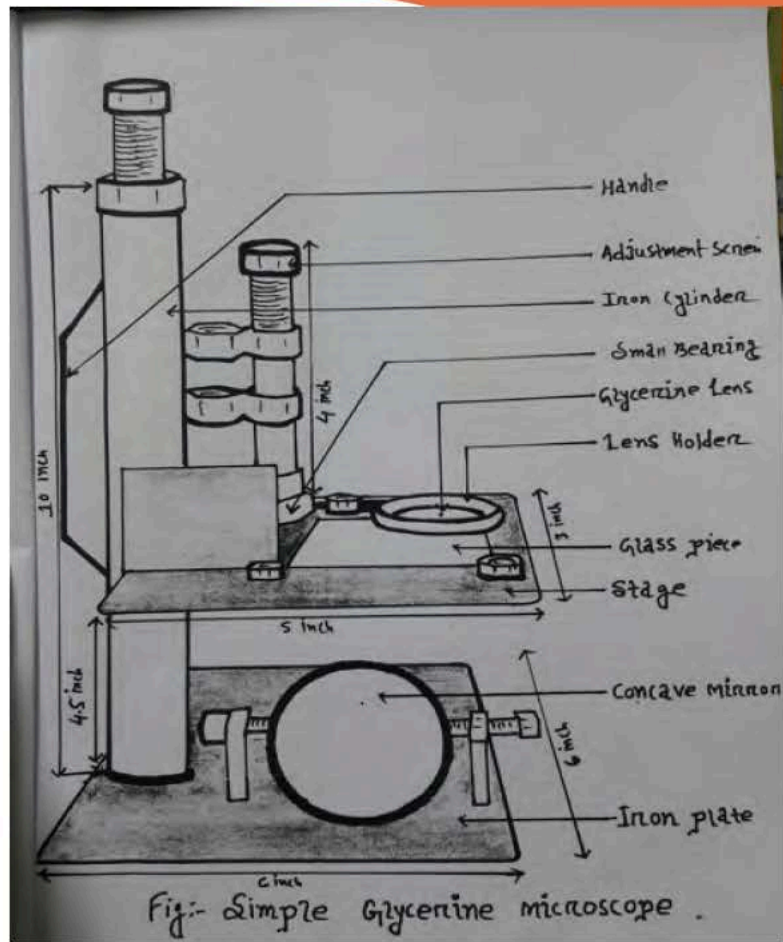
- 6-inch x 6-inch iron plate
- 1 Ft. length iron cylinder
- 1 concave mirror
- Nut -2-4 nose for fine adjustment screw
- Bolt-2 inch -2 nose
- Nut-6 nose for design of stage (4 nose nut)&Lower iron plate (2 nos nut)
- 5-inch x 3.3-inch iron plate for stage
- 1 glass piece – 3x2 inch
- 4-inch bolt for fine adjustment screw
- 1 small bearing
- Iron handle
- 1 torch light for sufficient light if necessary
- Lens holder

OBJECTIVES: -

- Creating scientific discovering intellectuality among the school going students.
- To know the anatomical science properly using this microscope.
- To see enlarge size of a biological objects from its tiny parts
- To provide an easy idea about of microscope of its activity.
- It is homemade machine & low cost, so every schools can use this microscope.

ADVANTAGES: -

- We can see an object tiny part in large size.
- It is use biological practical classes.
- Students can learn through this simple glycerine microscope.
- We can onion & potato cell with this microscope.



Certificates

Working components

Radiology: - The third eye of Medical Science

Abstract

Radiology is a branch of medical science that involves diagnosis and guided treatment of various diseases, based on the information obtained from clinical imaging tests. The benefits of diagnostic imaging are immense and have revolutionized the practice of medicine. The increased sophistication and clinical efficacy of imaging have resulted in its dramatic growth over the past quarter century. Although data derived from the atomic bomb survivors in Japan and other events suggest that the expanding use of imaging modalities using ionizing radiation may eventually result in an increased incidence of cancer in the exposed population, this problem can likely be minimized by preventing the inappropriate use of such imaging and by optimizing studies that are performed to obtain the best image quality with the lowest radiation dose. The ACR, which has been an advocate for radiation safety since its inception in 1924, convened the ACR Blue Ribbon Panel on Radiation Dose in Medicine to address these issues. This white paper details a proposed action plan for the college derived from the deliberations of that panel.

Key words: Radiation dose, Radiation Safety, Radiation Risk, Radiation Exposure, Radiations, Exposure to patients and personnel

Background

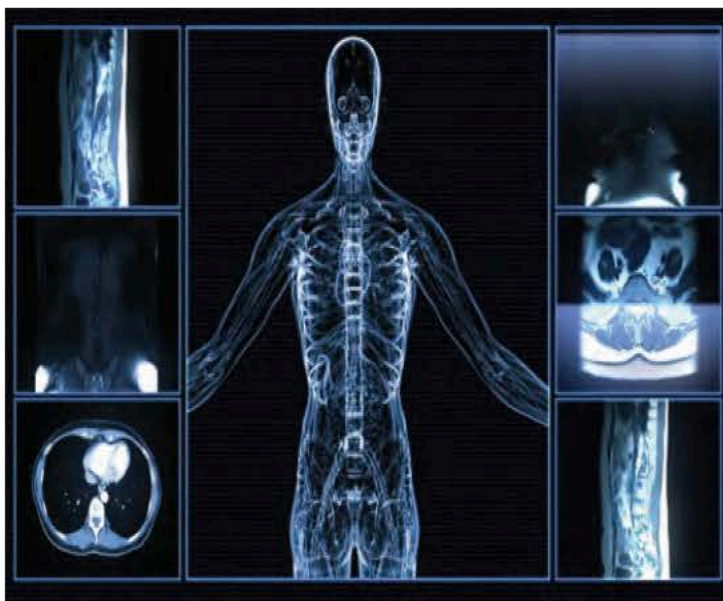
Radiation has been used for diagnostic purposes in medicine for more than a century. The benefits are immense and certainly exceed the risks. The more recent development of remarkable equipment such as multidetector row computed tomography and the increased utilization of x-ray and nuclear medicine imaging studies have improved the lives of our patients and, along with other new modalities, revolutionized the practice of medicine. However, this dramatic evolution of imaging has also resulted in a significant increase in the population's cumulative exposure to ionizing radiation. Will this cause an increased incidence of cancer years down the line? Although the answer to that question is currently under debate, the presumption is that it will.

Consequently, there is increasing international and federal interest in, and scrutiny of, radiation dose from imaging procedures. Although there has been recent widespread interest in patient safety issues, the possible hazards associated with radiation exposure generally have not been brought into clear focus by the public or members of the medical community other than radiologists.

Radiologists make the most valuable and visible contribution towards the medical science by image interpretation. Radiology, also called diagnostic imaging, is a series of different tests that take pictures or images of various parts of the body. Many of these tests are unique in that they allow doctors to see inside the body. Several different imaging exams can be used to provide this view, including X-ray, MRI, ultrasound, CT scan, mammography, nuclear medicine, fluoroscopy, bone mineral densitometry and PET scan.

Radiology's role is central to disease management or in simple word it is diagnosis, with a wide choice of tools and techniques available for the detection, staging and treatment. Diagnostic imaging provides detailed information about structural or disease related changes. Early diagnosis saves lives. Without diagnosis there can be no treatment, there can be no cure.

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Radiologists are professionals who specialize in diagnosing diseases and injuries through medical imaging techniques such as x ray & computed tomography, magnetic resonance image, ultrasound.

Radiology has been a distinct medical speciality with unique technique from its interception. The origins of specialisation can be traced back to the technical nature of X-ray image capture and perhaps more significantly the difficulty of exposing, transporting and developing images on fragile glass plates for subsequent interpretation. Despite pressure in the early 1900s to define radiology as a technical service, radiographic image interpretation and reporting required medically trained specialists. Therefore, radiologists have been clinical specialists, who have

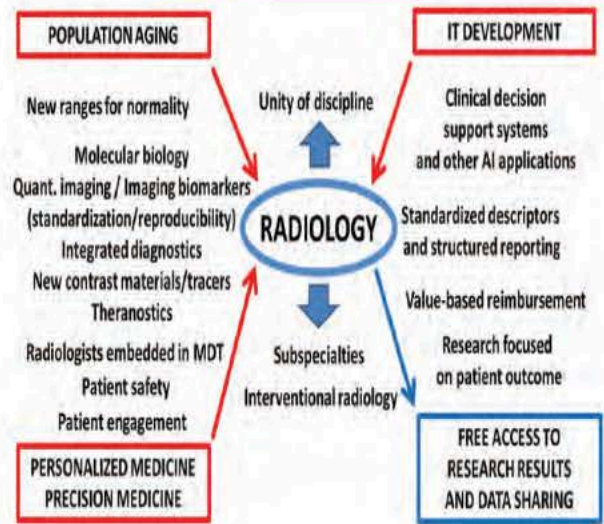
been obliged to also become experts in image capture technology, broad-based advances in engineering and, more recently, applications of information technology for healthcare, which continue to drive and be driven by radiology.

In this modern era radiology is the key diagnostic tool for many diseases and has an important role in monitoring treatment and predicting outcome. It has several imaging modalities in its armoury which have differing physical principles and techniques of varying complexity. The detail and sensitivity of these techniques is now of a high standard and the use of imaging for structural diagnostics, nanotechnology, functional and quantitative diagnostics and molecular medicine is steadily increasing. Technological advances in digital imaging have also enabled the images produced to be post-processed, manipulated and also transmitted rapidly all over the world to be viewed simultaneously with the transmitting centre with the help of PACS.

Radiologists have been strongly involved in these technological developments and have been responsible for much of the evaluation of different investigations. Medical radio diagnosis have developed the knowledge of the appropriate and advanced integrated imaging algorithms to maximise clinical effectiveness and to decrease the chances of error. They have also been responsible for the implementation of these developments into the clinical setting and for ensuring the best use of assets in diagnosing and treating diseases.

The improved image clarity and tissue differentiation in several situations has dramatically increased over short period of time range. Diagnostic information has been developed in many cases by demonstration of pathology without the requirement of invasive tissue sampling. The use of imaging for functional evaluation and cellular activity has created a new direction for radiologist.

Thus the rapidly developing and expanding field of imaging becomes a challenge to our specialty, especially as it has also become so attractive to others. We should therefore be concerned to ensure the future of radiology as a medical specialty and take into consideration the forces and the dynamics surrounding our profession by meeting them with foresight and flexibility.



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Abstract

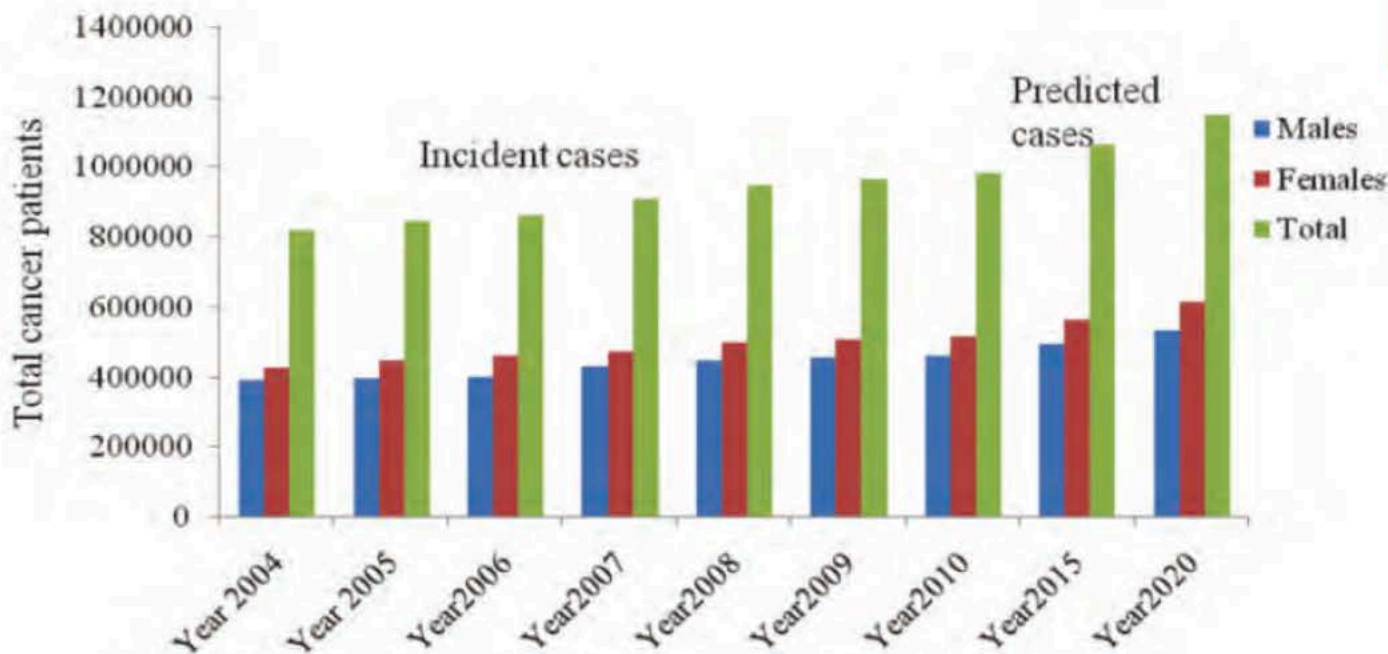
Among various diseases, cancer has become a big threat to human beings globally. As per Indian population census data, the rate of mortality due to cancer in India was high and alarming with about 806000 existing cases by the end of the last century. Cancer is the second most common disease in India responsible for maximum mortality with about 0.3 million deaths per year. This is owing to the poor availability of prevention, diagnosis and treatment of the disease. All types of cancers have been reported in Indian population including the cancers of skin, lungs, breast, rectum, stomach, prostate, liver, cervix, oesophagus, bladder, blood, mouth etc. The causes of such high incidence rates of these cancers may be both internal (genetic, mutations, hormonal, poor immune conditions) and external or environmental factors (food habits, industrialization, over growth of population, social etc.). In view of these facts, the present article describes the status of various types of cancers in India and its comparison at global level. Besides, attempts have been made to describe the main causes of cancer along with their preventive measures. In addition to this, efforts have also been made to predict the effect of increasing number of cancer patients on the Indian economy.

Introduction

In spite of good advancements for diagnosis and treatment, cancer is still a big threat to our society (Kotnis et al, 2005). This is the second most common disease after cardiovascular disorders for maximum deaths in the world (Jemal et al, 2007). It accounts for about 23 and 7% deaths in USA and India, respectively. The world's population is expected to be 7.5 billion by 2020 and approximations predict that about 15.0 million new cancer cases will be diagnosed; with deaths of about 12.0 million cancer patients (Brayand et al, 2006). The prevalence of cancer in India is estimated to be around 2.5 million, with about 8, 00,000 new cases and 5, 50,000 deaths per annum (Nandakumar, 1990-96). According to 1991 Indian census data, about 609000 cancer cases have been observed. This number had drastically increased to 806,000 by the end of the last century; with 96.4 and 88.2% age standardized rates for males and females; out of 100,000 cases analysed (Rao et al, 1998). During last one decade, about 70% cancer cases have been diagnosed and treated with survival of a few patients (Dinshaw et al, 1999). It is believed that in near future the number of cancer patients will increase in the developing and under developed countries, which may rise up to 70%; a serious issue for all of us. The magnitude of cancer problem in the Indian Sub-continent (sheer numbers) is increasing due to poor to moderate living standards (Wynder et al, 1974) and inadequate medical facilities. Most frequently observed cancers in Indian population are of lungs, breast, colon, rectum, stomach and liver (Nandakumar, 1990-96; Rao et al, 1998; Murthy et al, 2004). Nowadays, India is growing with a good progress rate and probably will become a developed country within a few decades resulting into its participation in the world development. Therefore, it is important to study the status of cancers in India so that advance measures may be taken to control this havoc in near future. In view of these facts, attempts have been made to study the status of cancers in India including its causes, preventive measures, effect on Indian economy and comparison with global scenario.

Cancer scenario in India

A data of cancer patients was compiled from 2004 to 2010 in India and shown in Figure 1
Cancer scenario in India A data of cancer patients was compiled from 2004 to 2010 in India. Based on the increasing trends of cancer patients during the last few decades, the numbers of cancer patients have been predicted by the end of 2015 and 2020 in India. These compiled data show that the number of male, female and the total cancer patients in 2004 were 390809, 428545 and 819354 respectively. The number of male and female cancer patients increased continuously up to 2009, with 454842, 507990 and 962832 cases for male, female and total cancer patients, respectively. Similarly, 462408 male cancer patients and 517378 female cancer patients were recorded, with a total number of 979786 patients in 2010. Thus, it is clear from this Figure that the number of cancer cases has increased gradually with time. Moreover, a prediction of cancer patients in 2015 and 2020, respectively, has also been made. The different types of cancers observed in India are discussed in the following sub-sections briefly.



Source: Cancer Therapy Vol 8, 56-70, 2011 Cancer Scenario in India with Future.... Available from: https://www.researchgate.net/publication/230560896_Cancer_Scenario_in_India_with_Future_Perspectives

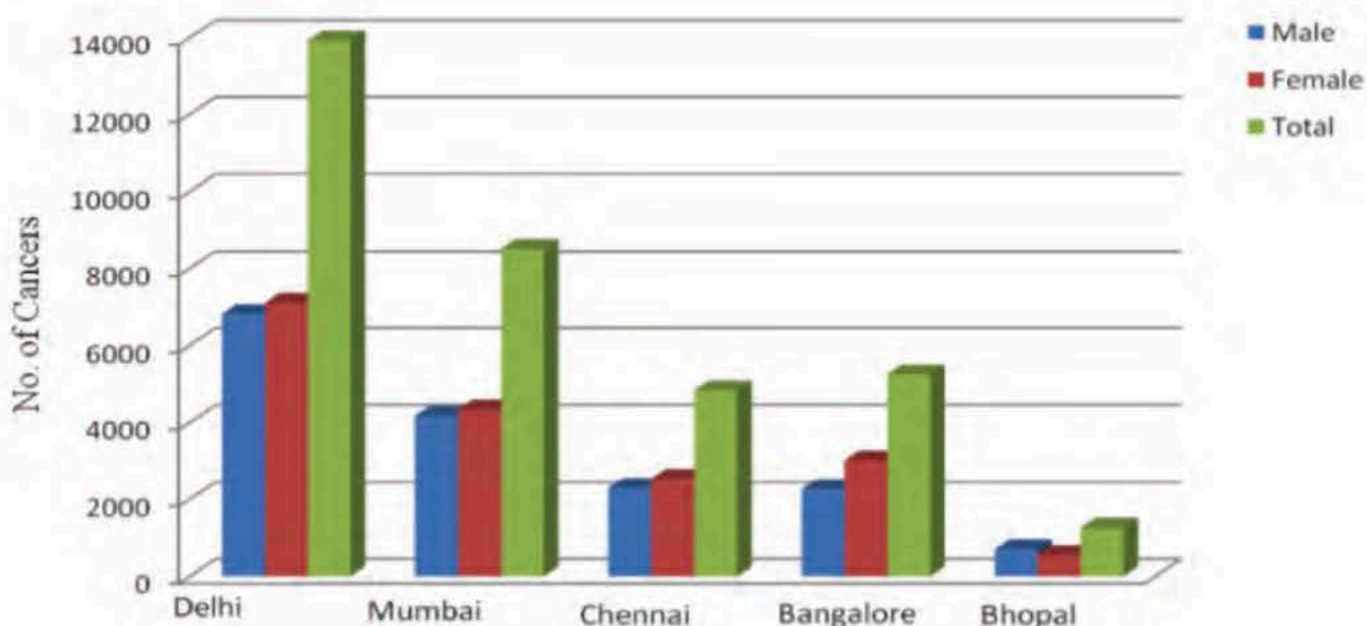
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Lung cancer It was observed that lung cancer was rare in the beginning of the last century (Parkin et al, 2000) but later on it was diagnosed in various patients. Banker et al. (Banker et al, 1955) reported about 9210 consecutive autopsies of lung cancer patients in 1970, which were 14.4% of all cancer types. But, nowadays, it has become almost epidemic resulting in greater number of deaths than those caused by colorectal, breast and prostate cancers (Khuri et al, 2001). The data collected by the National Cancer Registry Program of the Indian Council of Medical Research; from six different parts of the country including both rural and urban areas; showed varying degrees of incidence in different areas (ICMR, 1988-89). The most common forms of malignancies in males during 1989 in Bombay, Delhi, and Bhopal were cancers of trachea, bronchi and lungs. These cancers were also reported in other cities in the order of Madras > Bangalore > Barshi. These sorts of cancers were rare in females except in Bombay and Bhopal, where they ranked at sixth and seventh positions of malignancies, respectively. Efforts have also been made to find out the total number of cancer cases in five metro cities of India (New Delhi, Bombay, Chennai, Bhopal and Bangalore). Delhi has the highest number of total cancer cases among the five metropolitan cities studied. Total numbers of cancer patients reported in Delhi was 13920 having 6815 and 7105 males and females, respectively. Mumbai showed the second highest number of cancer patients with 8505 total cases including 4170 and 4335 males and females, respectively. Bangalore occupied the third position with 2262 and 2998 male and female patients, respectively (total patients; 5250). Chennai stood at the fourth position having 2296 and 2528 as male and female cases; with a total number of 4824 cancer patients. Total cancer patients were low in Bhopal (1255) with 701 and 554 males and females, respectively. These trends of cancer patient distribution among discussed metropolitan cities may be due to different levels of environmental pollution, food habits, living style etc. Besides, the population density in these cities may also be a contributing factor towards increasing number of cancer patients.

Breast cancer Breast cancer is the most common malignancy type diagnosed in women in developed countries and the second most common type diagnosed in developing countries. Breast cancer has been described as an alarmingly health problem in India (Yeole et al, 2003). According to the reports, breast cancers have badly attacked women population in India. A survey carried out by Indian Council of Medical Research (ICMR) in the metropolitan cities viz. Delhi, Mumbai, Bangalore and Chennai; from 1982 to 2005; has shown that the incidences of breast cancer have doubled. Over the years, the incidences of breast cancer in India have steadily increased and as many as 100,000 new patients are being detected every year (Yip et al, 2006; Michael et al, 2003). A 12% increase has been registered by cancer registries from 1985 to 2001, which represented 57% rise of cancer burden in India (Yip et al, 2006; Hadjiiski et al, 2006).

Stomach cancer Stomach is one of the most essential organs of human body, which frequently gets cancer and stands at fifth position (Parkin et al, 1999). South East Asian countries including India were reported to have lower rates of stomach cancers (Rao et al, 1998; WHO, 2000-01). However, the prevalence of stomach cancer was found to be quite high in Mizoram, North East India. Reports from the National Cancer Registry Programme suggested that stomach remained the leading site of cancer in males in Chennai from 1990 to 1996 with Age Adjusted Rate [(AAR) =13.6/105], followed by Bangalore (9.5/105), Mumbai (6.4/105), Delhi (3.9/105), Bhopal (3.4/105) and Barshi (1.2/105). In Mizoram, AAR of stomach cancer has been found to be high in both males (39.1/105) and females (14.4/105) as compared to other parts of India. On the basis of the prevalence of stomach cancer Mizoram occupied the first position among Indian states. Moreover, this state comprised fifth position globally (Figure 3) (Phukan et al, 2004).

Gall bladder cancer Gall Bladder Cancer (GBC) was first diagnosed during laparotomy or laparoscopy procedures, which were expected to confirm the presence of benign gall bladder diseases (Misra et al, 1997). Almost 2% gall stone patients were diagnosed with GBC. Gall bladder cancer is the most common abdominal malignancy in northern parts of the country (Singh et al, 2004). An incidence rate of 4.5 and 10.1% per 100 000 population of males and females, respectively, has been reported by the Indian Council of Medical Research Cancer Registry in some northern parts of India (ICMR, 1996). The highest incidence of GBCs in India has been reported along the Ganges delta (Kaushik et al, 1997). Gallstones associated with gallbladder carcinoma have been reported in 70-90% of patients with GBC. Approximately, 0.4% of all patients with gallstones have GBC (David et al, 1997). E. Cervical cancer The most susceptible site of cancer in women in the developing countries is cervix (Parkin et al, 1992). During last few decades, it has been observed that the number of cervical cancer cases in women has decreased in India.



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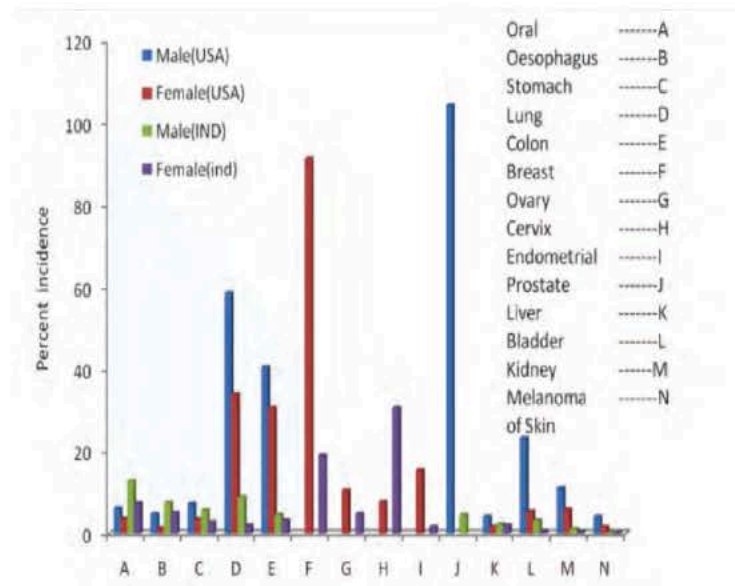
Oral cancer In 2003, Indian Council of Medical Research (ICMR) reported that oral cancer is very common in India (ICMR, 1992). There has been a substantial increase in the incidences of oral sub-mucous fibrosis; especially among youngsters; which further increased the incidence of the oral cancer (Gupta et al, 1998). Presently, oral cancer is the fourth common type of malignancy after lung, stomach and liver in males. It is the fifth common cancer after cervix, breast, stomach and lung cancer in females (Park, 1997). Regional Cancer Centre (RCC) Kerala reported about 14% oral cancer patients out of which 17.0 and 10.5% cases were in males and females, respectively (Padmakumary, 2000). A significant number of oral cancer patients have been reported in Agra, Allahabad, Mainipuri, Varanasi and Moradabad belt of Uttar Pradesh (Wahi et al, 1965).

Miscellaneous cancers Besides these, some other sorts of cancers have been observed in India. The incidence of esophageal cancer in India is moderately high; associated with diets and lifestyles. According to a data from cancer registries in India, esophageal cancer is the second most common cancer among males and the fourth most common cancer among females (Gajalakshmi, 2001). Colorectal cancer is a disease that usually affects individuals of age 50 years or more (Anthony, 1998). There is a sharp increase in the incidence rate of colorectal cancer after the age of 45 years and 90% of cases are found in persons over the age of 50 years (Lawrence et al, 2004). Head and Neck Neoplasia (HNN) are major forms of cancers in India, which account for nearly 23 and 6% in males and females, respectively (ICMR, 1992). The five year survival of the disease varied from 20-90% depending on the sub-site of origin and the clinical extent of the disease (Mehrotra et al, 2005). India is known to have the world's largest reported incidences of HNN in women (Sankaranarayan et al, 1998). Nearly 0.2 million head and neck cancer cases are diagnosed in the country annually and approximately 4.5 million globally.

Conclusion

A careful reading of the above discussion in this article clearly indicates an increased number of cancer patients every year in India. Various factors responsible for cancer genesis have been discussed, which need to be controlled for their eradication. India is a growing country playing a crucial role in the development of the whole world, and, hence, needs special attention on this issue. We should create awareness among public about the cancer havoc and its prevention. The different programs should be started by Government and NGOs for creating awareness among Indian public. The diet and living style are important factors to control the spreading of cancers and, hence, Indians should be careful about these facts. Briefly, cancer is disturbing the growing economy of the country, which can be saved by proper handling of this disease. In view of these facts, it is very important to eradicate this havoc. Let us hope for the best future of this country, which is playing an essential role in the development of the whole world.

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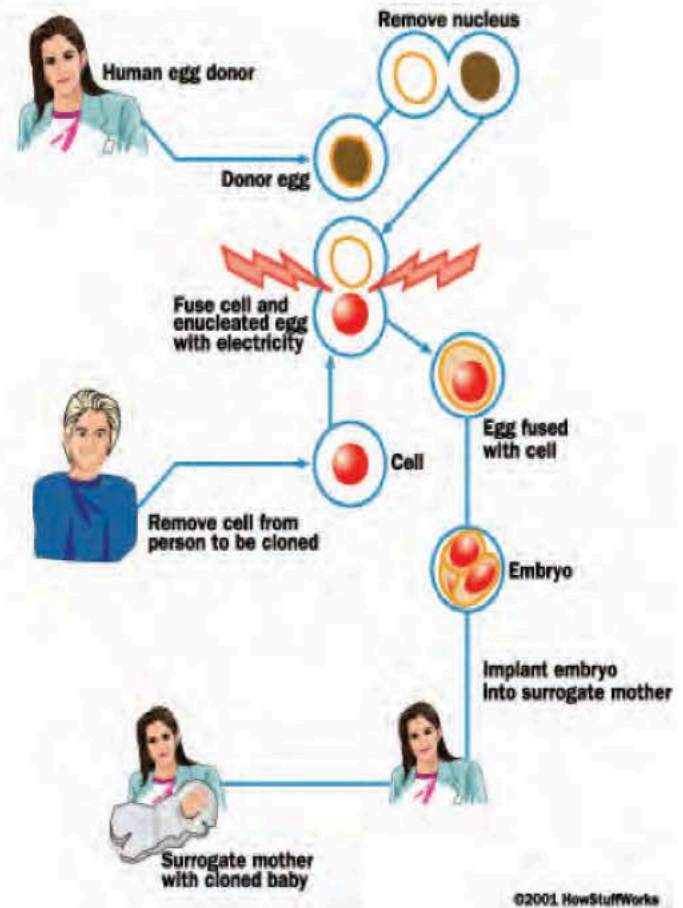


Human Cloning

Anirban Majumder
BMLT 1st year

Abstract

There are continued claims of attempts to clone humans using nuclear transfer, despite the serious problems that have been encountered in cloning other mammals. It is known that epigenetic and genetic mechanisms are involved in clone failure, but we still do not know exactly how. Human reproductive cloning is unethical, but the production of cells from cloned embryos could offer many potential benefits. Human cloning is the creation of a genetically identical copy of a human. This is artificial human cloning and reproduction of human cell and tissue.



Background

In the 2000 science fiction movie *The Sixth Day*, the height of human cloning and the way people perceive it—or desire for it to be perceived—manifests in such a creative way that the whole concept transcends ordinary inquiry. It may prompt dozens of questions, some of which may begin with “can cloning really do this?” Not only does the film cover the gamut of the cloning process, but it also lacks one element—truth. This “Hollywood” idea of cloning, along with that of books and television, influences humans to associate specific feelings or images with the process. Often culminating from wild imaginations, ideas of clones as “brainless monsters” or, in Arnold Schwarzenegger’s case in *The Sixth Day*, identity thieves—run rampant through most movie-goers or anybody who picks up a book. The thoughts of identity theft or eventual loss of diversity due to cloning appear to be legitimate concerns and thus require focus. To the public, misunderstandings regarding the cloning process as well as a clone’s identity need immediate resolution so that it no longer plays the role of “entertaining movie plot” to non-scientists. Before dismissal, it is first appropriate to examine the various claims that comprise the human cloning “scare.” A common concern stereotypes clones as devoid of physical or personality differences from those of the cloned individual. According to the misconception, the clone would begin life at the same age as the cloned individual and

Nobel Prize winning geneticist Joshua Lederberg advocated cloning and genetic engineering in an article in the *American Naturalist* in 1966 and again, the following year, in the *Washington Post*. He sparked a debate with conservative bioethicist Leon Kass, who wrote at the time that the programmed reproduction of man will, in fact, dehumanize him. Another Nobel Laureate, James D. Watson, publicized the potential and the Perils of cloning in his *Atlantic* monthly essay, moving toward the cloning man in 1971.

In 2018, the first successful cloning of primates using somatic cell nuclear transfer, the same method as Dolly the sheep, with the birth of two live female clones was reported.

In somatic cell nuclear transfer, the nucleus of somatic cell is taken from a donor and transplanted into a

host egg cell which had its own genetic material removed previously, making it an enucleated egg. After the donor somatic cell genetic material is transfer into the host oocyte with a micropipette, the somatic cell genetic material is fused with the egg using an electric current. Once the two cells have fused the new cell can be permitted to grow in a surrogate. This is the process that was used to successfully clone Dolly the sheep.

There would be a lot of advantage in cloning humans. Let's say someone will die if they can't get a heart transplant. If scientist could clone the human heart, they might be able to save that person life. Many couples around the world give anything for a chance to have a child. With cloning they would be able to clone a human being that would grow up to be just like one of them.

In India doesn't have specific law regarding cloning but has guidelines prohibiting whole human cloning or reproductive cloning. India allows therapeutic cloning and the use of embryonic stem cells for research processes.

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The basic techniques have been published, but you still need to know what you are doing. The standard procedure hasn't changed much since the cloning of Dolly the sheep, but working with humans puts a premium on getting it right.

Here's how it's done:

- 1 Nuclei are removed from donated eggs . . .**
Doctors harvest eggs from female donors who have taken fertility drugs, then suck out the genome-bearing nuclei with a needle
- 2 . . . the eggs are fused with "parent cells" . . .**
Cells from the human who is to be cloned are mixed with the nucleus-free eggs; a jolt of electricity forces some to fuse, giving the eggs new nuclei
- 3 . . . and embryos form**
Some of these rebuilt eggs divide to form embryos that are implanted in surrogate mothers. Some will inevitably abort, largely owing to genetic defects. But eventually some will come to term and be born as apparently normal children

Labels in diagram: NUCLEUS, DONOR EGG, CELL NUCLEUS, CLONING CANDIDATE, ELECTRIC CHARGE, EMBRYO, CLONE, BABY BORN SHARING EXACT DNA OF CLONING CANDIDATE.

A WALK THROUGH THE HISTORY OF 'NURSING IN INDIA'

Abstract

This article gives an elaborate description of the history of Nursing in India from 1500 BC. The evolution through different stages: Buddhist era, Mughal rule, British Empire and democratic India is depicted here. The nursing world is excellent; it facilitates wellness by combining science and care. Nursing is the science of care; this fact is also highlighted in the title of a publication belonging to the school of nursing at UCSF - University of California San Francisco, titled "Science of Caring". So, if nursing is the science of care, Nurses are agents of care; and through this system our society receives scientific care. Therefore, the contribution of this profession immensely impacts the wellbeing of any society.



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Key words

History, Nursing

"Team work is the ability to work together toward a common vision. The ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results. ability to direct individual accomplishments toward organizational objectives. It is the fuel that allows common people to attain uncommon results." Andrew Carnegie

To write about the historical perspective of nursing in India is a difficult task. India has gone under so many encroachments political, Social and cultural that there is no continuity in the information available. There are two reasons, (i) the invaders destroyed it (ii) as far as the nursing is concerned hardly any recording was done regarding the nursing care or nurses. It was an auxiliary to the medical care. In the 21st Century also there is not much change observed. Other side of the coin is the nurses themselves are not much keen to know the historical background of the profession. History of Nursing is a subsidiary subject even today. Many Scholars and Organizations have tried to write the History of Nursing in India but what they get are the scattered threads in different literature. The Trained Nurses Association of India established in 1908 with the amalgamation of Association of Nursing Superintendents and started publishing Nursing Journal of India in 1910 has collected these threads and has come out with the book History of Nursing in India and Pakistan. Now revised as History of Nursing in India.

The word Nurse originally came from the Latin word 'Nutrient', meaning to suckle, referring to a well Nurse. It was during late 16th century its attained its modern meaning of a person who cares for the infirm. About 100 B.C.E, the Charaka Samhita was written in India, stating that good medical practice requires a patient, physician, Nurse and medicines, with the Nurse required to be knowledgeable, skilled at preparing formulations and sympathetic towards everyone and clean.

Infact the Sushrut Samhita (700 BC-600 BC) mentions about the patient care by women. It states that the women who have children are good hearted. Possessing strong character, are experienced in conducting labour, affectionate in nature, free from grief with good endurance and able to make the expectant woman happy. This is true in 21st Century and accepted by the Global Nursing World. No wonder the Indian Nurses are in great demand all over the world. The other authenticated document available for the study on nursing in India is a book by Madeline Healy (1907-2007) there are some other authors who have written about the nursing in India. It is also recorded that Matru Seva Sangh (Nagpur) and Seva Sadan Society Pune, where Ramabai Ranade was associated and did efforts to bring Indian women particularly from Then Bomaby Province to Nursing.

The women who bought significant change in Nursing in India was none other Miss Florence Nightingale. In 1865, Miss Florence Nightingale drew up some detailed "Suggestions on a system of Nursing for hospitals in India". Graduates were seat out from the Nightingale school of Nurses, at St. Thomas hospitals, England to start

similar schools in our country. St. Stephens hospital in Delhi was the first one to begin training the Indian girls as Nurses in 1867. In the year 1871, the first School of Nursing was started in Government General Hospital, Madras with 6-month diploma Midwives program with four mid-wife students.

Between 1890 and 1900 many such schools under either mission or Govt. were started in various parts of India. In 1908, the Trained Nurses Association of India was formed to uplift the dignity and honour of nursing profession. In 1926, Madras state formed the first registration council. The first four-year basic bachelor's degree program was established in 1946 at the RAK College of Nursing in Delhi and Vellore.

The Indian Nursing Council was passed by our ordinance on December 31st 1947. The first two year post graduate program was started in 1960 at the College of Nursing, Delhi since then the Indian Nursing Council has worked tirelessly in improving the standards of profession and Mahatma Gandhi said – “The way to find yourself, is to love yourself in the service of other”. We the Nurses planned to be the healers for the patients and contribute the prosperity of health sector.

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Sometimes

I

inspire my patients

They inspire me

most

of the times

A Nurse

have always had an active social life.

Lifestyle

It's important to be aware of ways that your health, environment, and lifestyle may contribute to memory loss. The detrimental health effects that can occur from drinking and smoking, caused by alcohol and tobacco, are now well known. But beyond producing ailments such as cirrhosis of the liver and lung cancer, overindulgence in these common substances can permanently damage your ability to think clearly and remember everyday life.

Don't smoke. Smoking heightens the risk of vascular disorders that can cause stroke and constrict arteries that deliver oxygen to the brain. Smoking a pack of cigarettes, a day exposes you to 1,000 micrograms of toluene (among other things), which can cause headaches, confusion and affect your ability to think clearly.

Drink in moderation. Having a few beers or glasses of wine several times a week can begin to interfere with your ability to remember. Alcohol destroys brain tissue and interferes with the process of absorbing information so that it never enters long-term memory.

Reduce stress. Stress is one of the brain's worst enemies. Cortisol, the stress hormone, damages the brain over time and can lead to memory problems. But even before that happens, stress or anxiety can cause memory difficulties in the moment. When you're stressed out or anxious, you're more likely to suffer memory lapses and have trouble learning and concentrating.

Health

Sometimes, even what looks like significant memory loss can be caused by treatable conditions and reversible external factors.

• **Side effects of medication.** Many prescribed and over-the-counter drugs or combinations of drugs can cause cognitive problems and memory loss as a side effect. This is especially common in older adults because they break down and absorb medication more slowly.

• **Depression.** Depression can mimic the signs of memory loss, making it hard for you to concentrate, stay organized, remember things, and get stuff done.

• **Vitamin B12 deficiency.** Vitamin B12 protects neurons and is vital to healthy brain functioning. In

fact, a lack of B12 can cause permanent damage to the brain. Older people have a slower nutritional absorption rate, which can make it difficult for you to get the B12 your mind and body need. If you smoke or drink, you may be at risk.

• **Thyroid problems.** The thyroid gland controls metabolism: if your metabolism is too fast, you may feel confused, and if it's too slow, you can feel sluggish and depressed. Thyroid problems can cause memory problems such as forgetfulness and difficulty concentrating.

Eat

Recent evidence suggests that good nutrition is essential for our mental health; the brain requires nutrients just like our heart, lungs or muscles do. A healthy, balanced diet can boost brainpower and increase feelings of wellbeing.

1. Wholegrain
2. Oily Fish
3. Blueberries
4. Eat more tomatoes
5. B Vitamins
6. Blackcurrant boost
7. Pick up pumpkin seeds
8. Broccoli

Conclusion

Staying healthy and feeling your best is important at any age and that doesn't change just because you have a few more grey hairs. For many, retirement is not a time to slow down but a time to explore new adventures and hobbies. These tips can help you maintain your physical, emotional and mental health and guide you on the best approach to take to enjoy your later life to the full.

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NANOTECHNOLOGY for HEALTHCARE

Dipankar Das
BMLT 1st year

We know that now our lives are depending on technology for everything around us. With technology everything that was difficult in the past has become easy now (Harris, 2004). Nano technology in the medical field is used to quantify the best clinical symptoms and outcomes, such as pain, and diseases, which were difficult to measure. In addition, the applications of nanotechnology in medicine create a great opportunity to improve the quality of medical and health care; also, increased knowledge and researches of modern medicine with the capacity to manipulate with materials at the Nano scale to accurate diagnosis and therapy.

DRUG DELIVERY BY NANO SYSTEMS: The new drug carriers in Nano-scale offer the chance of development and increase the therapeutic index of drug molecules. This increasing is proved by their effectiveness, decrease their toxicity for physiological tissues. The approaches of drug delivery are of importance for medicine and healthcare. Materials and nanotechnology play an important role to make advancement of drug delivery (Zhang, Chan, & Leong, 2013). Drug delivery requires that accurate navigation through biological processes in the body by using carriers which carry the drug; so, these new opportunities will achieve more success when properties for particles can be controlled in real time. With these advantages we can timely control the particles by their interactions with other cells.

EARLY DETECTION FOR DISEASE: The main goal of nano technology in the medical field is that accurate diagnosis and early detection for diseases to effective treatment without side effects. Also evaluate the effective treatment by non-invasively methods (Caruthers, Wickline, & Lanza, 2007). There is no doubt that nanotechnology will become a cornerstone in the medical field. There are many applications for nanotechnology in cancer for fight pain, suffering and death. There are modalities already in use for diagnostic and treatment, with many others at different stages of pre-clinical testing.

HOW NANOTECHNOLOGY COULD REENGINEER US

NEURO PROBLEMS
The Imperfect Brain
Cognitive Therapies
Eye Problems in Focus
The Bionic Contact Lens
Soy Wild? (Nano-Music to Our Ears)

BRAIN Therapeutic nanotechnology deliver drugs, reconstruct brain cells, and restore cognitive function

EYES Nanotech contact lenses provide medication, sun protection, vital stat

EARS Nanoparticles medicate and repair the ear to reverse sensorineural hearing loss and vertigo

SKIN Nanopolymer materials regrow skin and tissue

BONES Nanoparticles on bones repair breaks and strengthen bones in days to weeks

CANCER DETECTION Nanosensors 1000 times better than mammograms find breast cancer and nano-instruments destroy and prevent it

SENSITIVITY Robotic prostheses transmit information to the brain so patients feel and use them like native limbs

ANTIBACTERIAL Nanotherapies self-adjust to fight bacterial and viral infections, saving millions of lives each year

MUSCLES Robotic limbs and suits increase muscle strength to 100 times human capacity for long missions

VITALS Implanted biosensors manage glucose and vital signs, releasing meds and detecting emergencies

NEURODEGENERATIVE DISORDERS affect over 3 million Americans and 25 million worldwide

BAD VISION Over 150 million Americans use glasses or contacts, and 4 million have glaucoma

HEARING LOSS 36 million American adults and nearly half of all adults 75 and older have hearing loss

BURNS Over 322,000 people around the world die from burn-related injuries every year

FRACTURES Broken bones take months to heal

BREAST CANCER 1 in 8 American women gets breast cancer

LOST OF FEELING Prosthetic limbs and implants leave amputees without a sense of touch

INFECTION 4 of the top 10 causes of death in poor countries are infectious diseases

FATIGUE Soldiers and astronauts lack the muscle strength to endure lengthy missions

DIABETES 26 million Americans have to monitor blood glucose for diabetes

Other highlights: Nano-Skin to the Rescue / Tissue Generation for Burn Victims; If it ain't broke, it's because of the nanos; The NanoTech Cure for Cancer; Fragile immune systems; Vastly at risk; Curing the Common Cold?; Impenetrable Fortress.

Are you afraid of Anesthesia? Don't be, it's a blessing of science

Dipankar Das
BMLT 1st year

In the practice of medicine (especially surgery and dentistry), anesthesia is a state of temporary induced loss of sensation or awareness. It may include analgesia (relief from or prevention of pain), muscular paralysis (muscle relaxation), amnesia (loss of memory) & sedation (unconsciousness).

Anesthesia enables the painless performance of medical procedures that would cause severe or intolerable pain to an anesthetized patient.

Three broad categories of anesthesia exist:

- **General anesthesia** suppresses central nervous system activity and results in unconsciousness and total lack of sensation.
- **Sedation** suppresses the central nervous system to a lesser degree, inhibiting both anxiety and creation of long-term memories without resulting in unconsciousness.
- **Regional and local anesthesia**, which block transmission of nerve impulses between a targeted part of the body and the central nervous system, causing loss of sensation in the targeted body part. So, patient remains conscious, unless general anesthesia or sedation is administered at the same time.

Two broad classes exist:

1. Peripheral blockade inhibits sensory perception in an isolated part of the body, such as numbing a tooth for dental work or administering a nerve block to inhibit sensation in an entire limb.
2. Central, or neuraxial, blockade administers the anesthetic in the region of the central nervous system itself, suppressing incoming sensation from outside the area of the block. Examples include epidural anesthesia and spinal anesthesia.

Medical Uses:

- Hypnosis (a temporary loss of consciousness and with it a loss of memory. In a pharmacological context, the word hypnosis usually has this technical meaning, in contrast to its more familiar lay or psychological meaning of an altered state of consciousness not necessarily caused by drugs.)
- Analgesia (lack of sensation which also blunts autonomic reflexes)
- Muscle relaxation anesthesia affect the endpoints differently.

Almost all healthcare providers use anesthesia to some degree, however most health professions have their own field of specialists in the field including medicine, nursing and dentistry.

Special Populations: - There are many circumstances when anesthesia needs to be altered for special circumstances due to the procedure (such as in cardiac surgery, cardiothoracic anesthesiology or neurosurgery), the patient (such as in pediatric anesthesia, geriatric, bariatric or obstetrical anesthesia) or special circumstances (such as in trauma, prehospital care, robotic surgery or extreme environments).



Biochemical and Histological Analysis to Study the Role of Black Tea in Prevention of Postmenopausal Osteoporosis

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Tea, most popularly consumed beverage worldwide, is also rich in flavonoids and polyphenols, including catechins, theaflavins and thearubigins, which are thought to contribute to the health benefits of tea (Frei and Higdon, 2003). There are three main types of tea Black tea, Green tea and Oolong tea. Approximately 76% to 78% of the tea produced and consumed worldwide is black, 20% and 22% is green and less than 2% is oolong (McKay and Blumberg, 2002).

People have been brewing and consuming the beverage made from the extracts of leaves of the *Camellia sinensis* plant for many centuries. For example, people in the United Kingdom have been drinking tea for 350 years and in Asia for more than 4,000 years (Gardner et al., 2007). The pattern of tea consumption and the preference for a particular type of tea varies according to cultural and geographical diversity. Black tea, as opposed to unfermented green or semi-fermented oolong tea are consumed principally in Europe, North America and North Africa (except Morocco) and in Asian sub-continent countries like India, Bangladesh, Pakistan and Ceylon. Although tea consumption and its health benefits have been recognized since the beginning of its history, the scientific investigations of this beverage and its constituents has been underway for less than four decades. Increasing interest in the health benefits of tea has led to the inclusion of tea extracts in dietary supplements and functional foods. Tea has shown to prevent a number of chronic diseases and cancers. Epidemiological studies also suggest that the consumption of tea flavonoids may be associated with reduced risk of coronary heart disease, stroke and cancer-related deaths (Langley-Evans, 2000).

Osteoporosis is a complex, multi-factorial disease of skeleton characterized by bone fragility due to a reduction in bone mass and possible alteration in bone architecture, which leads to a propensity to fracture with minimum trauma. Often osteoporosis is nicknamed as "silent killer", as it develops over time without noticeable symptoms. However, in postmenopausal women, it is a very common disease because of lack of the ovarian hormones. Risk of bone fracture is substantial among women with osteoporosis. More than 40% of postmenopausal women with osteoporosis are expected to experience at least one fragility fracture (Reginster and Burlet, 2006). Although osteoporosis is most common in postmenopausal women, bone loss and fractures are also fairly common in men. Literature review revealed that nearly 1 in 4 men older than 60 years would have an osteoporosis-related fracture (Gruntmanis, 2007). Like women, men also experience substantial rates of morbidity and mortality after fracture (Gruntmanis, 2007). Despite the prevalence and deleterious consequences of bone loss and fractures, patients with osteoporosis continue to be under diagnosed and under treated (Stafford et al., 2004). Therefore, it is important to identify individuals at high risk of osteoporosis and to implement preventive strategies. Few of these important therapeutic and preventive strategies currently available are mentioned below.

Therapeutic and Preventive Strategies for prevention of osteoporosis

- | | |
|---|---|
| 1. Bisphosphonates | 6. Anti-RANKL Antibody |
| 2. Selective Estrogen Receptor Modulators (SERMs) | 7. Nutrition |
| 3. Calcitonin | 8. Calcium supplementation with Vitamin D |
| 4. Hormone Replacement Therapy (HRT) | 9. Exercise and life style |
| 5. Parathyroid Hormone | Phytoestrogens |

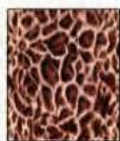
Among all these therapeutic and preventive strategies, hormone replacement therapy (HRT) is considered as the best therapeutic intervention. However, the adverse side effects of HRT have raised the necessity for finding suitable alternatives for the treatment of osteoporosis. These include the several phytochemicals having phytoestrogenic activity.

Black tea (*Camellia sinensis*) has been reported as a medicinal plant with rich flavonoid content and plethora of health-promoting effects including phytoestrogenic efficacy. Several epidemiological studies related to bone health protection (Hegarty et al., 2000; Wu et al., 2002; Chen et al., 2003) have revealed possible role of black tea in preservation of skeletal health and prevention of osteoporosis.

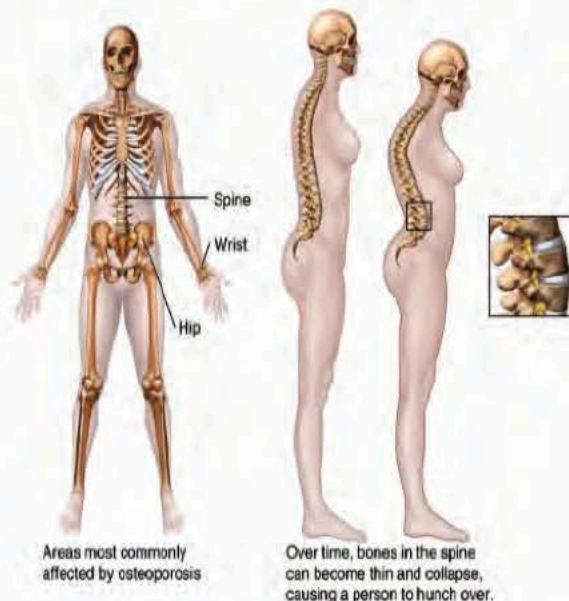
Earlier, it was reported that changes of bone metabolism in female rats after ovariectomy are similar to the alterations in early postmenopausal women. The positive relationship between black tea and bone preserving efficacy was first reported in a rat model of osteoporosis in which animals were ovariectomized (i.e. removal of ovaries; also called oophorectomy which resembles the postmenopausal condition) (Das et al., 2004). In this landmark study, the authors evaluated the effects of black tea extract (BTE) in preventing bone loss due to



Normal Bone



Bone becomes thinner and weaker with osteoporosis.



Areas most commonly affected by osteoporosis

Over time, bones in the spine can become thin and collapse, causing a person to hunch over.

ovarian hormone deficiency caused by bilateral ovariectomy.

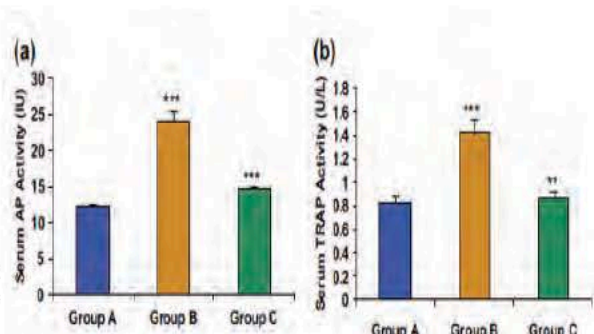
Das et al. also reported that BTE could significantly lower ovariectomy-induced increases in the excretion of urinary calcium and phosphate, indicating that BTE can decrease bone resorption and/or increase bone formation. The bone preserving efficacy of BTE was further confirmed when ovariectomy-induced increases in serum alkaline phosphatase activity and the urinary calcium to creatinine ratio, two bone turnover parameters, were significantly improved by BTE (Table 1; Figure 1). The close association between increased serum concentrations of tartrate-resistant acid phosphatase (TRAP), and urinary hydroxyproline, respectively, as indices of osteoclastic activity and degradation of Type I collagen are well established (Stepan, 1996). The role of BTE against these two markers was also found to be equally promising, as both these parameters were significantly ameliorated by BTE in ovariectomized rats (Table 1; Figure 1) (Das et al., 2004).

Table 1: Urinary Excretion of Calcium, Phosphate, Creatinine, Hydroxyproline and Calcium: Creatinine Ratio in Sham (Group A), Ovariectomized (Group B) and Ovariectomized D BTE-Treated Group (Group C) of Rats.

Parameters	Experimental Groups			Significance Level	
	Sham-Control (Gr. A)	Ovariectomized (Gr. B)	Ovariectomized + BTE (Gr. C)	Gr. A Vs. Gr. B	Gr. B Vs. Gr. C
Calcium (mg/24h)	0.61 ± 0.029	2.96 ± 0.12	0.81 ± 0.029	P < 0.001	P < 0.001
Phosphate (mg/24h)	2.26 ± 0.093	3.32 ± 0.093	2.75 ± 0.070	P < 0.001	P < 0.01
Creatinine (mg/24h)	0.79 ± 0.017	1.57 ± 0.12	0.84 ± 0.018	P < 0.001	P < 0.001
Hydroxyproline (mg/24h)	0.312 ± 0.05	0.716 ± 0.08	0.332 ± 0.08	p < 0.01	P < 0.01
Calcium: Creatinine	0.603 ± 0.025	1.644 ± 0.13	1.06 ± 0.089	p < 0.001	P < 0.01

Values are expressed as mean ± SE (n = 6).
From Das et al., 2004. Evidence for a prospective anti-osteoporosis effect of black tea (Camellia sinensis) extract in a bilaterally ovariectomized rat model. Asia Pac. J. Clin. Nutr. 13(2), 210-216.

Figure 1: Effect of Ovariectomy and Ovariectomy + BTE on Serum Alkaline Phosphatase (AP) (Fig 1a) and Tartrate-Resistant Acid Phosphatase (TRAP) (Fig 1b) Activity in Different Groups of Rats. Error bars represent means ± SE. (n = 6). In statistical analysis Group B (OV) has been compared with Group A (sham-control) and Group C (OV + BTE) with Group B (OV). ** Denotes significant difference p < 0.01 and *** Denotes p < 0.001. (From Das et al., 2004. Evidence for a prospective anti-osteoporosis effect of black tea (Camellia sinensis) extract in a bilaterally ovariectomized rat model. Asia Pac. J. Clin. Nutr. 13(2), 210-216).



Black tea flavonoids were found to enhance synthesis of estrogen from extra-gonadal sites (Simpson and Davis, 2001; Simpson et al., 2001). As a corollary to this study, Das et al. (2005) further examined whether BTE-mediated enhanced serum estrogen titer could provide any protection against hypogonadal bone loss, as estrogen physiologically does (Table 2).

Results of these studies clearly indicated that black tea flavonoids have counter-regulatory influences upon ovariectomy-induced bone resorptive changes, as well as preservation of bone minerals and restoration of bone densities (bone breaking strength) (Table 2).

The results of histomorphometric (Table 3) and histological (Figure 3) analysis of cancellous and cortical bones further corroborated the earlier notion that black tea could prevent progression of bone loss in an ovariectomized rat model.

Parameters	Experimental Groups			Significance Level p ^a
	Sham-Control (Group A)	Ovariectomized (Group B)	Ovariectomized + BTE (Group C)	
Tibia cortical thickness (C.Th) (µm)	265 ± 8.34	178.20 ± 6.35 ^b	234.98 ± 13.35 ^b	<0.01
Lumbar vertebra cortical thickness (C.Th) (µm)	63.71 ± 5.88	46.03 ± 1.41 ^b	55.43 ± 1.59 ^b	<0.01
Trabecular thickness (Tb.Th) (µm)	29.87 ± 1.79	16.97 ± 1.70 ^b	26.76 ± 1.57 ^b	<0.01
Cancellous bone volume (BV/TV)%	14.83 ± 0.76	11.11 ± 0.62 ^b	14.43 ± 0.79 ^b	<0.01

Values are expressed as mean ± SE (n = 8).
From Das et al., 2005. Protective action of aqueous black tea (Camellia sinensis) extract (BTE) against ovariectomy-induced oxidative stress of mononuclear cells and its associated progression of bone loss. Phytother. Res. 23(9), 1287-1294.
^aDenotes significance level based on Kruskal-Wallis nonparametric ANOVA test.
^bDenotes significance level p < 0.01 based on Mann-Whitney U multiple comparison test (Gr. A vs. Gr. B; Gr. B vs. Gr. C).

Results of these studies clearly indicated that black tea flavonoids have counter-regulatory influences upon ovariectomy-induced bone resorptive changes, as well as preservation of bone minerals and restoration of bone densities (bone breaking strength) (Table 2).

The results of histomorphometric (Table 3) and histological (Figure 2) analysis of cancellous and cortical bones further corroborated the earlier notion that black tea could prevent progression of bone loss in an ovariectomized rat model.

Parameters	Sham-Control	Ovariectomized	Ovariectomized + BTE	*Significance Level	**Significance Level		
					Group A vs. Group B	Group B vs. Group C	Group A vs. Group C
Serum estrogen (pg/ml)	73.89 ± 2.37	14.50 ± 1.46	38.24 ± 6.66	P < 0.001	P < 0.01	P < 0.01	P < 0.01
Serum TRAP (U/L)	0.858 ± 0.007	1.406 ± 0.098	0.860 ± 0.053	P < 0.01	P < 0.01	P < 0.01	NS
Urinary Hydroxyproline (mg/24 h)	0.342 ± 0.035	0.725 ± 0.064	0.378 ± 0.059	P < 0.01	P < 0.01	P < 0.01	NS
Bone densities (gm/cm ³)							
Femur	1.430 ± 0.038	1.191 ± 0.022	1.314 ± 0.019	P < 0.001	P < 0.01	P < 0.01	P < 0.01
Thoracic rib	1.628 ± 0.050	1.330 ± 0.023	1.517 ± 0.026	P < 0.001	P < 0.01	P < 0.01	NS
Thoracic vertebra	1.371 ± 0.035	1.188 ± 0.030	1.279 ± 0.007	P < 0.001	P < 0.01	P < 0.01	NS
Lumbar vertebra	1.251 ± 0.010	1.145 ± 0.016	1.254 ± 0.023	P < 0.01	P < 0.01	P < 0.01	NS
Bone calcium (% of ash weight)							
Femur	23.37 ± 0.48	18.92 ± 0.51	23.00 ± 0.69	P < 0.01	P < 0.01	P < 0.01	NS
Thoracic rib	36.45 ± 0.70	24.90 ± 0.25	32.04 ± 1.18	P < 0.001	P < 0.01	P < 0.01	P < 0.01
Thoracic vertebra	22.01 ± 0.42	11.84 ± 0.55	21.31 ± 0.15	P < 0.001	P < 0.01	P < 0.01	NS
Lumbar vertebra	21.09 ± 0.77	17.94 ± 0.40	21.38 ± 0.67	P < 0.01	P < 0.01	P < 0.01	NS
Bone phosphate (% of ash weight)							
Femur	20.74 ± 0.46	18.11 ± 0.52	21.57 ± 0.28	P < 0.001	P < 0.01	P < 0.01	NS
Thoracic rib	23.33 ± 0.21	20.80 ± 0.43	22.94 ± 0.24	P < 0.001	P < 0.01	P < 0.01	NS
Thoracic vertebra	20.54 ± 0.22	17.16 ± 0.52	20.98 ± 0.08	P < 0.001	P < 0.01	P < 0.01	NS
Lumbar vertebra	20.50 ± 0.46	16.50 ± 0.20	20.29 ± 0.47	P < 0.01	P < 0.01	P < 0.01	NS

Control: Group A; ovariectomized: Group B; ovariectomized supplemented with BTE: Group C; n = 7 for each group.
NS denotes not significant.
From Das et al., 2005. Physiological effects of black tea extract (Camellia sinensis) in an ovariectomized rat (Rattus norvegicus) model of osteoporosis. Life Sci. 77(5), 3983-3997.
^{*}Significance based on ANOVA while test.
^{**}Significance based on Mann-Whitney U multiple comparison test.

Table 2: Effect of BTE on Ovariectomy-Induced Changes in Serum Estrogen, Tartrate-Resistant Acid Phosphatase, Urinary Hydroxyproline, Bone Densities, Bone Calcium and Bone Phosphate Levels

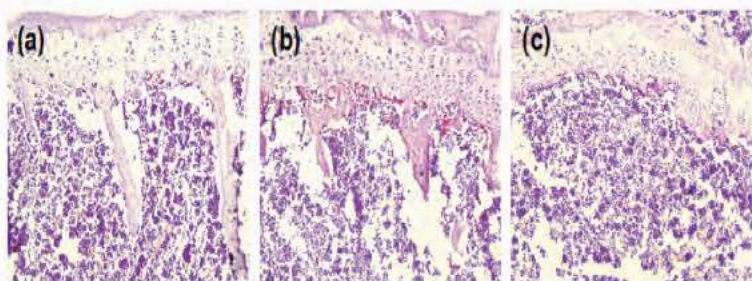


Figure 2: Histochemical Analysis of the Decalcified Proximal Tibia of a Rat. TRAP-positive cells (red coloured) are located immediately below the secondary spongiosae of the proximal tibia (a: Sham-control; b: Ovariectomized; c: Ovariectomized + BTE). Representative photomicrograph from ovariectomized rats (b) shows increased number of TRAP-positive osteoclast cells compared to the control (a) as well as the BTE-supplemented group (c) (X100). (From Das et al., 2009. Protective action of aqueous black tea (Camellia sinensis) extract (BTE) against ovariectomy-induced oxidative stress of mononuclear cells and its associated progression of bone loss. Phytother. Res. 23(9), 1287-1294).

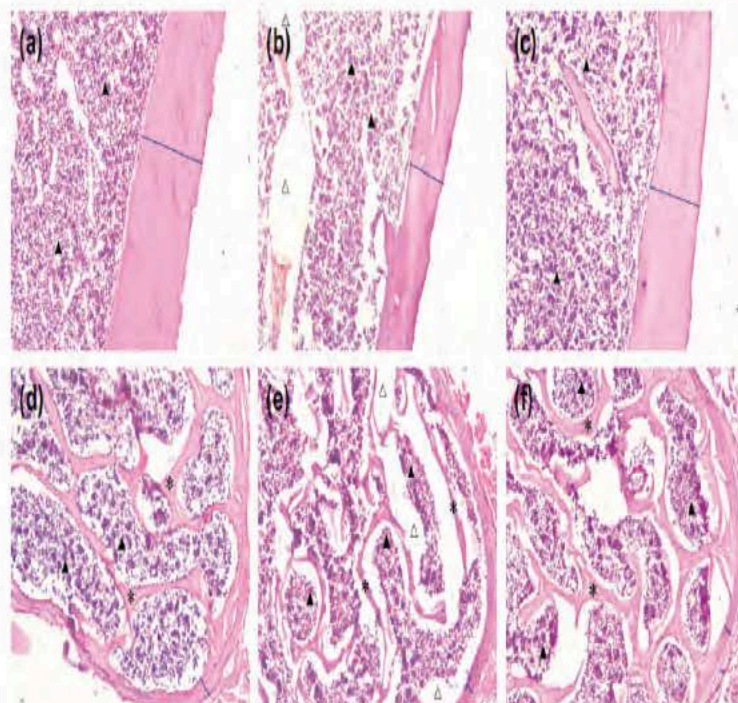


Figure 3: Histological Analysis of Tibia (a–c) and Lumbar Vertebra (d–f) of Rats (Hematoxylin-Eosin Staining, X100). Representative photomicrograph from the ovariectomized group (b) with a reduction in cortical thickness and empty bone marrow of the tibia compared to the sham-control group (a) and ovariectomized + BTE supplemented group (c). Photomicrograph of lumbar vertebra of ovariectomized group (e) with reduction in cortical thickness, empty bone marrow and reduced trabecular bone compared to sham-control group (d) and ovariectomized + BTE supplemented group (f). Straight black line: Cortical thickness; Solid triangle: bone marrow; Blank triangle: empty bone marrow; * trabecular thickness. (From Das et al., 2009. Protective action of aqueous black tea (*Camellia sinensis*) extract (BTE) against ovariectomy-induced oxidative stress of mononuclear cells and its associated progression of bone loss. *Phytother. Res.* 23(9), 1287-1294).

In summary, these studies reveal experimental evidences to suggest that aqueous black tea extract (BTE) has positive anti-osteoporosis and bone mass preserving effects. These studies also elucidate the possible mechanism of action by which BTE protects against such hypogonadal osteoporosis. It further supports the interpretation of earlier epidemiological reports that drinking tea might be beneficial in preserving skeletal health. Drinking of black tea could be a beneficial protector of bone loss especially in postmenopausal women.

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Abstract

Biological warfare is the intentional use of microorganisms, and toxins, generally of microbial, plant or animal origin to produce disease and death in humans, livestock and crops. The attraction of bioweapons in war, and for use in terroristic attacks is attributed to easy access to a wide range of disease-producing biological agents, to their low production costs, to their non-detection by routine security systems, and to their easy transportation from one place to another.



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Key Words: Biological Warfare, Bioterrorism, Biodefence.

Introduction

Biological weapons are not new. Biological agents have been used as instruments of warfare and terror for thousands of years to produce fear and harm in humans, animals, and plants. Because they are invisible, silent, odourless, and tasteless, biological agents may be used as an ultimate weapon—easy to disperse and inexpensive to produce. Individuals in a laboratory or research environment can be protected against potentially hazardous biological agents by using engineering controls, good laboratory and microbiological techniques, personal protective equipment, decontamination procedures, and common sense. In the field or during a response to an incident, only personal protective measures, equipment, and decontamination procedures may be available. In either scenario, an immediate evaluation of the situation is foremost, applying risk management procedures to control the risks affecting health, safety, and the environment.

The microbiologist and biological safety professional can provide with responsible official a practical assessment of the biological weapons incident to help address microbiological and safety issues, minimize fear and concerns of those responding to the incident, and help manage individuals potentially exposed to a threat agent. A biological weapon is a weapons system that intentionally uses bacteria, viruses or toxins to cause death or disease in people, animals or plants. A biological weapon is a combination of a biological agent (the bacteria, virus or toxin) and the means of keeping the agent alive and virulent, transporting it to where it will be dispersed and a dissemination mechanism. For example, one biological weapon could be anthrax spores, a plane and a pesticide sprayer. Another might be salmonella bacteria bred in a laboratory, transported in a vial and poured into some food. Some biological weapons are suited to large-scale production and dissemination for use in war, some are more likely to be considered for use in a smaller-scale terrorist attack, and others are only suitable as weapons of assassination. The World Health Organization has defined biological weapons as ‘those, whose intended target effects are due to the infectivity of disease-causing microorganisms and other replicative entities, including viruses, infectious nucleic acids and prions. This definition does not include toxins which are produced by microorganisms.

As these toxins are produced and can be disseminated in similar ways to living microorganisms, they are often included in discussions of biological warfare. But, the 1972 Biological Weapons Convention and World Health Organization cover toxins as substances produced by any living organism, not only by micro-organisms, or by any other means, including synthesis and treated them under chemical weapons since they would be working, not through infectivity, but through toxicity. Some defined Biological weapons, or bioweapons, as those containing replicating microorganisms (viruses, fungi, and bacteria, including chlamydia and rickettsia), prions, protozoa, or poisonous chemical toxins produced by living organisms (e.g., botulinum toxin, cobra venom, and the plant toxin, ricin). Depending on the pathogen being used, these weapons may be employed against humans, animals, or crops. In some instances, multiple species groups (e.g., animals and humans) may be affected. The use of such weapons by a nation against other nations and by insurgents within nations is generally referred to as biological warfare or biowarfare, while the use of these weapons for terrorist activities is generally referred to as bioterrorism.

Definition: Biological weapons are defined as “microorganisms that infect & grow in the target host producing a clinical disease that kills or incapacitates.” Such microbes may be natural, wild-type strains or may be the result of genetically engineered organisms. These may be the products of metabolism (usually of microbial origin) that kill the targeted host & include biological toxins, as well as substances that interfere with normal behaviour, such as hormones, neuropeptides & cytokines. It is now possible to design and manufacture substances that mimic the action of biologics e.g. Nerve gases, pesticides etc. "Designer" substances may also be created that can be specifically targeted to a cell-type in an enemy (e.g. People with blonde hair and blue eyes).

Bioterrorism is the use of BWs as terror attack or threat. Usually terrorists are using the conventional means of destruction but there are chances that unprotected biological weapons may get into their hands and may use to create terror on a vast scale. Anthrax letters were used after 9/11 in the U.S.A. to create terror. Recently ricin letters were used in the U.S.A. by the terrorists.

Bioterrorism agents' important features of a perfect BW are:

1. Highly infectious and highly effective.
2. Easily produced with a long shelf life.
3. Efficiently dispersible.
4. Readily grown and produced in large quantities.
5. Stable on storage.
6. Resistant enough to environmental conditions.
7. Resistant to treatment

Viral Pathogens	Disease	Symptoms
Variola virus	Smallpox	Acute: malaise, fever, headache, vomiting. Erythematous rash spread centrally to the trunk, quickly progresses to papules/pustular vesicles (centrifugal distribution). Pustules → scabs after 8 - 14 days
H1N1 Virus	Swine flu	fever cough, fatigue, headache, nausea, vomiting, diarrhea. If the viral infection persists, and some can develop seizures.
Ebolavirus	hemorrhagic fever	Hemorrhagic Fever with a fatality rate of 50-90%. Sore throat, Weakness, Severe headache, Joint and muscle aches, Diarrhea, Vomiting Dehydration, Dry, hacking, cough, and Stomach pain.
Marburg-Virus	Marburg-Fever (Viral Hemorrhage. Fever)	Myalgia, fever, headache, flushing of the face and chest, conjunctival/cutaneous bleedings, dizziness, hypotension, renal insufficiency, shock, death
VEE-Virus	Venet. Equine Encephalitis	Acute: febrile illness with severe headache, fatigue, photophobia, nausea, vomiting, rigors.etc

Categories of microbes used as bioweapons

Based on the ease of transmission, severity of morbidity, mortality, and likelihood of use, biological agents can be classified into 3 categories: A, B, C.

A Category

- Can be easily disseminated or transmitted person-to person causing secondary and tertiary cases.
- Cause high mortality with potential for major public health impact including the impact on health care facilities.
- Cause public panic and social disruption.
- Require special action for public health preparedness. Anthrax (*Bacillus anthracis*), Botulism (*Clostridium botulinum* toxin), Tularemia (*Francisella tularensis*), small pox (*Variola major*) and viral hemorrhagic fevers (Arenaviruses, Bunyviridae and Filoviridae) are classified under category A.

B Category

- Are moderately easy to disseminate
- Cause moderate morbidity and low mortality
- Require specific enhancement of diagnostic capacity and enhanced disease surveillance

The following microorganisms and toxins are classified under category B

Bacteria: *Coxiella burnetii* (Q fever), *Brucella* species (Brucellosis), *Burkholderia mallei* (Glanders) *Burkholderia pseudomallei* (Meliodosis), *Rickettsia prowazekii* (Typhus fever) and *Chlamydia psittaci* (Psittacosis)

Viruses (Alpha viruses): Venezuelan encephalomyelitis, Eastern equine encephalomyelitis and Western equine encephalomyelitis.

Toxins: Ricin toxin from *Ricinus communis* (Castor beans), Epsilon toxin (*Clostridium perfringens*), and Enterotoxin B (*Staphylococcus aureus*) Food or Water Borne Pathogens: *Salmonella* species, *Shigella dysenteriae*, *Escherichia coli* O157:H7, *Vibrio cholerae* and *Cryptosporidium parvum*

C Category

Category C agents are the third highest priority. These include certain emerging pathogens, to which the general population lacks immunity, that could be engineered for mass dissemination in the future because of availability, ease of production, ease of dissemination, potential for high morbidity and mortality, and major public health impact. A potential pandemic strain of influenza, such as avian influenza, is one such example. Nipah, Hantavirus, SARS coronavirus are also included here

Toxins	Disease	Symptoms
<i>Clostridium botulinum</i>	Botulism	Blurred vision, dilated pupils, photophobia, difficulty with speaking/swallowing, (severe) muscle paralysis
Staphylococcal-Toxin	SEB-Intoxication	Sudden onset of fever, chills, cough, vomiting, diarrhea. Higher exposure: septic shock
Ricin	Ricin-Intoxication	Fever, chest tightness, nausea, gastrointestinal ailment, resp. failure, pulmonary edema

Bacterial Pathogens	Disease	Symptoms
<i>Yersinia pestis</i>	Pneumonic Plague	Acute: high fever, headache, productive cough blood-tinged sputum, vomiting. Hematogenous dissemination: sepsis, shock, meningitis
<i>Bacillus anthracis</i>	Inhalation Anthrax	Nonspecific symptoms of fatigue, myalgia, fever, nonproductive cough, followed by chest pain, respiratory distress, high fever, pneumonia. Other forms: Intest/ Cutan Anthrax (not as BW-Agents)
<i>Brucella suis</i>	Brucellosis	Nonspecific: Fever, malaise, body aches, sweats, muscle and joint aches. Hepato-/ splenomegaly
<i>Francisella tularensis</i>	Tularemia (Rabbit Fever)	Fever, chills, headache, myalgia, abdominal pain vomiting, diarrhea. Chest pain, pneumonia, cutaneous ulcer. Enlarged lymph nodes.
<i>Coxiella burnetii</i>	Q-Fever	Extremely infectious, no characteristic illness: severe headache, back pain, fatigue, weight loss
<i>Burkholderia mallei</i> <i>Burkholderia pseudomallei</i>	Glanders melioidosis	Severe sickness, fever, rigors, pulmonary distress abscesses of internal organs (e.g. liver and spleen)

Conclusions

Many scientists and authors advised to strengthen the Biological Weapons Convention to ensure compliance with the edicts – never, under any circumstances, to develop, produce, stockpile, or otherwise acquire or retain microbial or other biological agents, or toxins in quantities that have no justification for peaceful purposes; not to transfer agents, toxins, weapons, equipment, or means of delivery of biological weapons to others; and to take necessary measures to prohibit and prevent the development or acquisition of biological weapons by a nation's military or citizens. They also advised that, it must be done without impeding the necessary research for improving our scientific understanding of the environment and the world in which we live. Thus, defining the boundary between defensive and offensive biological weapons research is very mandatory.

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As the maxim goes, a sound body has a sound mind, and the two function in concomitant variation. Nobody can deny the importance of games in physical culture and character building. Games have immense influence on human personality. The main aim of education is symphonic and threefold benefits of human personality-physical, mental and moral development. Games and sports have numerous physical, mental and moral advantages. But the games and sports must be conducted in right spirit, at right place and at right time. This is particularly true about students. The approach to game or playing of games may be different for different persons. Games must be compulsory for students, because no play makes a student dull. They are essential for both physical and mental cultures. But the golden rule for the students is, play while you should play and work while you should work (Desantis, 2010). Although research interest on physical activity and health dates back to the 1950s, the breakthrough in the scientific evidence on health benefits of physical activity largely took place during the 1980s and 1990s. There is an overwhelming amount of scientific evidence on the positive effects of sport and physical activity as part of a healthy lifestyle. The positive, direct effects of engaging in regular physical activity are particularly apparent in the prevention of several chronic diseases, including: cardiovascular disease, diabetes, cancer, hypertension, obesity, depression and osteoporosis (<https://www.sportanddev.org/en/learn-more/health/health-benefits-sport-and-physical-activity>).

The Report from the United Nations Inter-Agency Task Force on Sport for Development and Peace states that young people can benefit from physical activity as it contributes to developing healthy bones, efficient heart and lung function as well as improved motor skills and cognitive function.

The interface between biomechanical (Hayes, 1982), physiological (Hasan et al., 1985), and peripheral (Zajac, 1993) and central nervous system (Behm & Sale, 1993; Wolpaw, 1994) operation to coordination of movement are mediated by different facets of psychological involvement (Bergenheim et al., 1996). To enhance the psychological component of physical movement, mental skills training has been recognised as an effective method (Driskell et al., 1994; Feltz & Landers, 1983). Primarily, mental skills training has developed from the necessity of the athlete to learn more about their individual mental life to allow a degree of control in coordinating effective movement through various psychological states of performance (Martens, 1987; Rushall, 1992).

Most mental skills training techniques can be grouped into two basic categories, cognitive and somatic methods. Cognitive methods include mental rehearsal, mental imagery and visualization, visuo-motor behaviour rehearsal, and cognitive-behaviour therapy. Somatic methods include biofeedback, progressive muscle relaxation and meditation. Although cognitive and somatic methods develop the psychological apparatus of the individual from different perspectives there is much overlap because of the nature of psycho-somatic function. Therefore, elements of each tend to permeate elements of all, but an explanation of a variety of approaches is useful to characterize the different aspects of human nature that contemporary psychology has undertaken to enhance the mental development of the athlete (Behncke, 2004).

Regardless of the consensus surrounding areas such as the physiology, biology, and chemical reactions, there is a major debate regarding genetics and the role of the nervous system in the development and change of personality. It is understood that genetics play a role in the construction and development of the human nervous system. As humans develop, there is an overproduction of neurons and apoptosis is a mechanism to systematically cause cell death to ensure an exact match of incoming axons to receiving cell (Kalat, 2013).

According to Vukasović & Bratko (2015), human behaviour genetics research offers insight into the vast and complex connections between the nervous system and human personality. Over the course of many studies on genetically related human personality, utilizing the three broad research designs, Vukasović & Bratko (2015) synthesized the findings of 45 prior studies, offering a meta-analytical analysis and insight into the controversy. As noted in their study, the findings suggest that 40% of an individual's personality is hereditary and contributed by genetics. This is in line with prior studies, such as Johnson et al., (2008), where 50 years of genetic research on human personality was analyzed and found similar results among a statistical analysis of these studies.

Within the confines of various cultures, life experiences, and expectations, it appears that environmental influence on human personality past the early development stage is still unclear. There is a long way to go to establish the environmental effects on individuals and separate these from established genetic factors (Patterson, 2016).

The health of the brain is tied to the health of the rest of the body, and vice versa. Studies suggest that exercise in early childhood can improve cognitive function and even contribute to a bigger hippocampus. A mother can exercise

with baby from a young age with activities like tummy time, which also help him develop muscle strength in his stomach and neck muscles and improve head control. One can encourage a more active lifestyle in children by getting them involved in sports and other play activities that they will enjoy. Fun summer activities and fun outdoor activities are great places to start (<https://www.adam-mila.com/brain-development-children-0-6-years/>).

The brain is very much involved to so many parts of a child's development. After all, it is the control centre of a little one's body. Lots of muscle tone is not much use without a robust guidance system, which is why good brain development goes hand in hand with good physical development. Our brain expertly determines which muscles need to contract and which need to relax at what time in order to make our body move in the way we would like it to

Neuromotor development, or the brain learning to use the body, comes in two flavors: gross motor skills, the ability to control large muscle groups, and fine motor skills, the ability to execute more fine-tuned movements. Gross motor skills will develop first and will allow a child to crawl, stand, and eventually learn to walk. Fine motor development will take longer to master, and involve learning to use motor activities and skills like the pincer grasp which will help a child manipulate objects. Hand-eye coordination (sometimes referred to as eye-hand coordination) involves the brain's use of information from the eyes to guide the hands, and what comes naturally to us in this department is incredibly hard for a developing baby. This sensory and motor skill will improve as the brain becomes faster at receiving and processing sensory input, and becomes quicker and more skilled at moving the hands. This is a skill that can be improved with practice, even in adults (<https://www.adam-mila.com/brain-development-children-0-6-years/>).

The neuro-anatomical construction is still a vital and important influence on human behaviour. The architecture of the brain acts as a road map to assist in understanding how parts of the brain interact with the rest of the nervous system and influence functional expressions, behaviour, and emotions. With genetic and environmental factors still being researched, it is difficult to separate these factors and clinical studies will require more intensive technology, resources, and dedicated scientists to solve this mystery. But since we know that the nervous system does play a role in human behaviour and that the environment can disrupt the normal development of the nervous system, perhaps 'cracking the code' may not be too far in the future (Patterson, 2016). Sports help students to study better, improves concentration, problem solving, memory.

Sports teach one to develop the following:

- 1. Team spirit:** Working towards a common goal as a member of a team, selflessly, personal interests notwithstanding.
- 2. Leadership skills:** Lead different people from all walks of life towards a common goal/objective. A good leader is one who leads others on to leadership.
- 3. Fairplay:** Though winning is important, losing is not a disgrace. Being generous and graceful in victory as well as defeat. Have respect for the vanquished.
- 4. Focus:** Sports teaches us to focus on the present. Past is irrelevant, and future, who knows?
- 5. Strength and abilities:** Sports teaches us to focus on our strengths and abilities, not on our opponent's strength and capabilities.
- 6. Planning:** Sports teaches us to plan ahead, see through the consequences of our act. We need to quickly assess the situation, adjust, adapt and act accordingly. Being flexible and not carry a fixed mindset. (Ghildiyal, 2015)

Psychology in Sports:

- 1. Positive attitude:** It is often said a game won or lost in the locker room before the start of the match. Having a positive attitude goes a long way in determining the eventual outcome of the game between closely matched participants.
2. We should respect for the opponent is necessary but should not let this to make us overwhelm.
3. 'Killer instinct' is necessary at all times (within the framework of fairplay). By this we will learn to respect the opponents. And acknowledging the fact that the slightest slackness shown by us will allow the opponent to claw back and the outcome of the game may easily be reversed.
- 4. Never Give up attitude:** However, hopeless situation may seem, success is just around the corner. No match is won till the last ball is bowled. We should play to our strength, give it our best, enjoy the game, we have nothing to lose. Loss is not the end, there is no shame, disrespect, humiliation, provided, we should give our best.
- 5. Fear of losing** will increase our anxiety and cause distress and hence leading to poor performance and undesirable results. A player should never bother about consequences, should always give his/her best shot² and to enjoy the game. (Ghildiyal, 2015)



A number of factors influence the way in which sport and physical activity impacts on health in different populations. Sport and physical activity in itself may not directly lead to benefits but, in combination with other factors, can promote healthy lifestyles. There is evidence to suggest that changes in the environment can have a significant impact on opportunities for participation and in addition, the conditions under which the activity is taking place can heavily impact on health outcomes. Elements that may be determinants on health include nutrition, intensity and type of physical activity, appropriate footwear and clothing, climate, injury, stress levels and sleep patterns.

Sport and physical activity can make a substantial contribution to the well-being of people in developing countries. Exercise, physical activity and sport have long been used in the treatment and rehabilitation of communicable and non-communicable diseases. Physical activity for individuals is a strong means for the prevention of diseases and for nations is a cost-effective method to improve public health across populations.

The WHO estimates that 36 million lives could be saved between 2005 and 2015 by deploying some simple, tested chronic-disease prevention strategies. The Centre for Disease Control (CDC) notes that people of all ages, who are generally inactive, may improve their health and well-being by becoming active at a moderate intensity level on a regular basis. Giannini et al. (2006) suggest that active lifestyles and physical fitness may represent the most effective strategies to prevent chronic disease and improve growth and development for children (Literature reviews on sport for development and peace, 2007).

Playing sport is helpful for mental upbringing much more than in the physical aspects. It builds character, teaches both analytical and strategic thinking, leadership skills, goal setting and much more. We should encourage children or people in general to play sports because being physically active is healthy for the mind and body. People who play sports also might learn character and behaviour traits that help fill out their personalities. A key role for the development of human personality is played by games and sports. We must pay our gratitude to Swami Vivekanda for his quote to the young generation to describe the importance of games and sports. He told this in a public lecture in 1897, later it was published in his book *Lectured from Colombo to Almora*. The quote is – “You will be nearer to Haven through football than through the study of Gita.”

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A COMMUNITY HEALTH NURSES

Koushik das
B.Sc. Nursing 2nd year

Care in the community
Is our career aim
It's diverse, eclectic,
With people, none the same
Their homes are in houses
On boats sheds
Their lives are individual
Elaborate in webs
We Nurse, we visit
Regarding their places
Home visit are brief
In the lives of our fold
All patients I think of
Have a story to tell
So let's begin quickly
And on sadness don't stay
Sweet, cream, cakes, sugar
With her chocolates and more
Life habits to adjust
Now diabetes at her door
Now seaman has leg ulcers
Which persist and won't go
He's tried all home supply
Of great aunt so and so
As a community health Nurse
To check his prosthesis
We talk he does listen
As community Nurse teaches.





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